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San Francisco Public Library Commission
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NOTICE OF MEETING

A special meeting of the San Francisco Public Library Commission will be held as follows:

DATE: Thursday, March 4, 2004
TIME: 5:00 pm NOTICE DIFFERENT START TIME
PLACE: Koret Auditorium, Main Library, lower level

This special meeting of the San Francisco Public Library Commission replaces the regular meeting which would have begun at 4pm. The regular meeting has been cancelled.

The meeting will be called to order.

1. PUBLIC COMMENT

(This item is to allow members of the public to comment generally on matters within the Commission's purview as well as to suggest new agenda items for the Library Commission's consideration.

2. RFID FORUM TIME CERTAIN 6:00pm DISCUSSION

(For the convenience of the public this item will be heard out of order beginning at 6pm)
Presentation on and discussion of Radio Frequency Identification (RFID) Technology and the benefits of and concerns with replacing bar code technology with RFID Technology in the Library System.

3. APPROVAL OF THE MINUTES ACTION

Presentation of, discussion of, and possible action to approve the Minutes of the regular Commission meeting of February 5, 2003.
Explanatory document: draft Minutes

4. CITY LIBRARIAN'S REPORT by City Librarian Susan Hildreth DISCUSSION

(This item is to allow the City Librarian to report on recent Library activities and make announcements)
The City Librarian will report on the following subjects: a report on the Public Library Association (PLA) meeting; exhibits and programs; and a report on the implementation of the Strategic Plan.

5. CHAGOYA MURAL RESOLUTION ACTION

Presentation and discussion of and possible action to approve a resolution in appreciation and thanks to Enrique Chagoya for his generous gift of his mural honoring Latino and Latin American writers to the Library.
Explanatory document: draft resolution

6. FRIENDS OF THE LIBRARY REPORT DISCUSSION

(This item is to allow the Friends of the San Francisco Public Library to inform the Commission of their current and proposed activities.)

Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION - Accessible Meetings Policy

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Know Your Rights Under The Sunshine Ordinance

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions, boards, councils and other agencies of the City and County exist to conduct the people's business. This ordinance assures that deliberations are conducted before the people and that City operations are open to the people's review.

For more information on your rights under the Sunshine Ordinance (Chapter 67 of the San Francisco Administrative Code) or to report a violation of the ordinance, contact Donna Hall, Administrator, the Sunshine Ordinance Task Force, City Hall, Room 244 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102-4689 or at 415/554-7724 ph. 415/554-5163 FAX and website at Donna_Hall@ci.sf.ca.us. Copies of the Sunshine Ordinance can be obtained from the Clerk of the Sunshine Task Force, the San Francisco Public Library and on the City's website at www.ci.sf.ca.us/bdsupvrs/sunshine.

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Michael Housh, Commission Secretary 1/21/03

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7. LABOR UNION REPORT

(This item is to allow members of library labor organizations to report on employee matters within the Commission's purview as well as to suggest new agenda items for the Library Commission's consideration.)

8. NEW BUSINESS

(This item is to allow Commissioners to introduce new agenda items for consideration.)

9. ADJOURNMENT (requires motion and public comment) ACTION

3/1/04 - M.Housh, Commission Secretary

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San Francisco Public Library Commission
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Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

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Michael Housh, Commission Secretary 1/21/03

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San Francisco Public Library Commission
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Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
resident

Carol Steiman
ice President

Helen Marte Bautista
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ichael Housh
ommission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Draft Minutes of the special meeting of Thursday, March 4, 2004
The San Francisco Public Library Commission held a special meeting in place of its regular meeting on Thursday, March 4, 2004 in the Koret Auditorium, Main Library.

The meeting was called to order at 5:04pm.

The following members were present: Commissioners Chin, Coulter, Higueras, Steiman, and Strobin.

Commissioner Streets was excused attendance.
Commissioner Bautista joined the meeting at 5:10 pm.

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AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public; the importance of the RFID Forum
Mr. David Grace; opposed RFID
Mr. Peter Warfield; concerns with RFID
Andy; more wireless technology availability in libraries

President Higueras announced that AGENDA ITEM #2 THE RFID FORUM would not be taken up until 6:00pm for the convenience of the public.

AGENDA ITEM #3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

Public comment on AGENDA ITEM #3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

An anonymous member of the public; the Minutes not fully or accurately reporting public comments
Mr. Peter Warfield; comments on online catalog problems not accurately reported

COMMISSION discussion of AGENDA ITEM # 3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

MOTION: by Commissioner Chin, 2nd Commissioner Bautista for approval of the Minutes of the regular meeting of February 5, 2004 with corrections if needed by the Commission Secretary after review of public comments.

Approved by the following vote:

ACTION: 6-0 AYE (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

AGENDA ITEM #4 CITY LIBRARIAN'S REPORT

The City Librarian reported on the following subjects: a report on the Public Library Association (PLA) meeting; exhibits and programs; and a report was presented by Deputy City Librarian Paul Underwood on the implementation of the Strategic Plan.

Public comment on AGENDA ITEM #4 CITY LIBRARIAN'S REPORT

An anonymous member of the public; strategic plan activities and RFID
Mr. Peter Warfield; recent exhibits and requests for reports
Mr. David Grace; concern about relationships with contractors

AGENDA ITEM #5 CHAGOYA MURAL RESOLUTION

Presentation and discussion of and possible action to approve a resolution in appreciation and thanks to Enrique Chagoya for his generous gift of his mural honoring Latino and Latin American writers to the Library.

Public comment on AGENDA ITEM #5 CHAGOYA MURAL RESOLUTION

An anonymous member of the public; history of the Chagoya Mural

Commission discussion of AGENDA ITEM ##5 CHAGOYA MURAL RESOLUTION

MOTION: Commissioner Coulter, 2nd Commissioner Bautista for approval of the proposed resolution honoring Artist Enrique Chagoya for his generous gift of his mural painting "Authors of Latin American Roots" to the Library.

Adopted by the following vote:
AYE 6-0 (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

The Friends of the Library reported: approval of a grant of $42, 500 to fund the Library's 125th Anniversary activities; on the 8th Annual Library Laureates Dinner on April 30; and about upcoming author lectures.

Public comment on AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

(None offered)

AGENDA ITEM #7 LABOR UNION REPORT

(No report offered)

A recess was called at 5:52pm
The Public Library Commission returned to session at 6:01pm

AGENDA ITEM #2 RFID FORUM (taken out of order as previously announced)

Presentation on and discussion of Radio Frequency Identification (RFID) Technology and the benefits of and concerns with replacing bar code technology with RFID Technology in the Library System.

(Presentations were made by panelists Kathy Lawhun, Chief of the Main Library, Ms. Gail McPartland, Assistant Director, Peninsula Library System, Ms. Ann Brick ACLU, Northern California Chapter, Mr. Lee Tien, Senior Staff Attorney, Electronic Frontier Foundation, Ms. Laura Quilter, Samuelson Law, Technology, and Public Policy Clinic, Boalt Hall School of Law, Mr. David Molnar, Electrical Engineering/Computer Sciences Department, UC Berkeley, and Ms. Jackie Griffin, Library Director, Berkeley Public Library followed by a question and answer session moderated by Deputy City Librarian Paul Underwood followed by public comment which was limited to 2 minutes per speaker for this item)

Public comment on AGENDA ITEM #2 RFID FORUM

Doug Loranger; SNAFU; public health concerns with electro-magnetic technologies
Anonymous member of the public; privacy concerns for library users
Peter Warfield; process used to consider RFID
Rachel MacLachlan; potential benefits of RFID
Diana Scott; related public health issues
Lori Guidos; repetitive stress injuries impacting library staff

Commission discussion of AGENDA ITEM #2 RFID FORUM

President Higueras noted that this was just the first step in a process to determine the suitability of RFID for the Library. The consensus of the Commission was that it would consider the following issues before deciding whether to approve the procurement of RFID technology for SFPL: consideration of long-term cost and benefits of RFID, including improved employee health; developing written rules encompassing the best practices for its use; consideration of what other libraries had done to implement RFID; and a review of questions about EMF (electro-magnetic frequency radiation) health related issues to address health concerns.

AGENDA ITEM #8 NEW BUSINESS

(No items were proposed)

AGENDA ITEM #9 ADJOURNMENT

Public comment on AGENDA ITEM #9 ADJOURNMENT

An anonymous member of the public; the late Daniel Boorstin

MOTION: by Commissioner Coulter, 2nd Commissioner Steiman that the meeting be adjourned In memoriam of the late Author sand former Librarian of Congress Daniel J. Boorstin.

Approved by the following vote:
6-0 AYE (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

There being no further business, at the hour of 8:23pm the Public Library Commission adjourned.

Michael Housh, Commission Secretary 3/16/04

Please note: These are draft minutes subject to change by the Library Commission. Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS to the March 4, 2004 Minutes:

How RFID Will work at SFPL.
Radio Frequency Identification: Choosing a model for Peninsula Library System.
An IEEC Spectrum article entitled: They Know Where you Are.
An Electronic Frontier Foundation memo to the Library Commission dated Oct. 1, 2003
RFID Implementation in Libraries: presentations to the ALA Intellectual Freedom Committee - recommendations for "Best Practices" .
RFID and Libraries: Both Side of the Chip.
Information on RFID (Radio Frequency Identification) System,
An aap memo dated Oct. 18, 2003.
Berkeley Public Library Best Practices.

The Chagoya Resolution

Minutes of the regular Commission Meeting of March 4, 2004

Appendix A

Library Commission meeting of March 4, 2004

The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16..

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.

The number of members of the public who spoke anonymously at this meeting. 1

San Francisco Public Library

100 Larkin Street, San Francisco, CA 94102

How RFID Will Work at SFPL

- RFID tags combine security and material identification functions. At check-out security activation of materials is automatic through interaction with the library's circulation software without staff intervention. Currently, staff must 'turn off' the security strip. With RFID the security process of turning tags off or on is automatic when an item is checked-in or out.

- We will use an RFID tag with the minimum amount of information on it – only a unique ID number or encryption for an item (no title or author information) and on/off for security.

- We will use an RFID tag that is a high frequency (13.56 Mhz) and passive (no battery). Passive tags must get an electrical charge from the reader antenna to respond to the reader and have a read range of less than an inch to 30 inches depending on the strength of the signal and the amount of copper antenna in the tag. Tags will also be read only, except for one bit which is read-write. That bit is either turned on or turned off, depending on whether the material is checked out or checked in.

- RFID readers will be in specially designed circulation workstations, patron self-charge stations, in security gates and in portable wands used by staff for inventory and finding missing items. Library RFID readers will only read SFPL's RFID tags.

- Library cards will not contain RFID tags and will not contain information about the library card holder or their account.

Service and Operational Benefits of RFID

Check-out will be the library function in which RFID has the greatest impact. It greatly increases the speed of the circulation process by eliminating the time-consuming process of barcode scanning and de-sensitizing the electromagnetic security strip. Multiple items (books, CD's, DVD's, videos & books on tape) can all be checked out simultaneously. RFID technology reduces the time required to check-in and check-out materials by as much as 50%.

Direct Benefits for Library Users

- Decreases waiting time for users at check-out and less labor time at the circulation desk. This frees up the staff to perform direct user services.

- Allows people on the move fast and easy transactions. Express or self check-out is easy to implement and easy to use with RFID. No need to sort materials into books, videos, CDs, etc. and handle each item separately; just put everything on the check-out station reader and it's all checked out at once.

- Improves management of the collection providing users with books ready to be checked-out immediately after being returned or to immediately fill reserves since staff will not have to individually check in each item.

- Allows users the same privacy as with the current barcode system. Currently a temporary record is kept in our online circulation system's server linking each user with material checked out on their library card. When material is returned, the record disappears. This does not change with an RFID system. There is presently no way to use the library system's circulation system to track an individual's previous borrowing record and this will be true with an RFID system.

Benefits for the Collection and User Services

- Highly efficient inventory control (the book collection) will increase ability to find a missing item and to pull requested material from the shelves. The collection can be inventoried by waving a handheld wireless wand instead of pulling each book from the shelf.

- Book check-in and sorting can be accomplished more economically and efficiently because orientation of items is not necessary. Currently the barcode has to be on the front so it can be scanned and the spine facing a certain way so the magnetic strip can be de- or re-sensitized.

- Security theft detection at the door is improved; the accuracy of detecting a stolen item is greatly increased from an average of 65% on conventional EM (electromagnetic strip) detection systems up to 100%.

- Streamline library operations associated with materials handling. For example, one tag replaces a barcode and security strip. The adding of one tag instead of two steps (adhering strip and barcode) will allow for faster processing of library materials.

- Reduce or eliminate special handling of media. Videos and audio tapes cannot be damaged inadvertently by the staff when de-sensitizing AV material since the

RFID tag can be used for all material. All material formats can be checked out simultaneously.

Direct Benefits for Library Staff

- Reduces and prevents repetitive stress injuries since equipment can be placed under a counter and staff can slide the stack of material on top of the reader instead of picking up and individually scanning every item.

- Reduces the steps in processing new books due to one tag for identification and security.

- RFID implementation will not result in staff reductions. Staff will be freed from repetitive, injury-prone tasks to work on more direct customer service including answering user questions and solving problems.

Other Uses of RFID Technology

- Automotive Immobilizer Anti-theft systems: ignition key transmits a unique identification code to an RFID reader connected to the car's computer. If code is correct, the computer allows the car to start; if not, the car cannot be turned on.

- Automotive Remote Keyless Entry: keyless entry pad button is pressed to lock and unlock vehicle doors using RFID technology.

- Card Key Security Access: employees of various industries and government agencies including the Main Library use RFID technology to enter a building and enter secure areas within a building.

- Toll Gate Travel: vehicles equipped with RFID tags on their windshields can pass through toll gates and have the tolls debited from a paid account. Example: FASTRAC (active battery tag).

- Animal tagging: pets, livestock, endangered species and other wildlife are being injected with a tiny chip under their skin with a unique ID number to track movements or theft.

Partial List of Libraries using or implementing RFID

- Berkeley Public Library, Santa Clara City Library, Peninsula Library System, Oakland Public Library Chavez Branch, Eugene, OR Public Library, Salt Lake City Public Library, Seattle Public Library, Philadelphia Free Library, Cerritos Public Library, Toronto Public Library & Utrecht (Netherlands) Public Library

RFID Technology and Reducing Risk Factors for RSI Injuries

RSI Definition

- Repetitive Stress Injuries also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs)
- RSIs are disorders of the musculoskeletal and nervous systems caused or aggravated by repetitive motions, forceful exertions, awkward posture and vibration or compressive forces (hard, sharp edges)
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels resulting in pain, tension and strains

General Risk Factors for RSIs among Circulation Staff:

- Repetition: Lifting, turning and opening books and AV materials during check-out and check-in
- Forceful exertion: Required pinch grip when picking up books and media and when opening and processing AV material
- Awkward postures of upper extremities (shoulders, arms, hands and wrists) when handling media

Specific Work Rates and Hazards at the Main Library*:

- Check-out Desk: Awkward postures and excessive handling requiring pinch grip and force to check-out items. Each piece of media must be individually handled. Workload: 12 events per minute/ 768 per hour (Highly repetitive when events exceed 3 per minute). Awkward and forceful hand/arm motions to desensitize material.
- Check-in Desk: Excessive grasping and handling to process returns. Each piece of media must be handled individually and 70% must be opened. 70% of books are being lifted, turned and flipped over in order to scan. Workload: 10 events per minute/ 575 per hour (Highly repetitive when events exceed 3 per minute)
- Sorting Room: Excessive grasping and handling to sort/process returns. Workload: 16 events per minute/ 940 per hour (Highly repetitive when events exceed 3 per minute)

Public Service Employees with Industrial Injuries:

- From January 2001 through January 2004 thirty-six (36) employees whose duties include public service have filed Worker's Compensation claims resulting in 260 loss work days; 500 modified/restricted work days; $265,000 paid costs

Summary:

- Goal is to reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material and to set up a system that will allow staff to slide material into place and have one motion for check-in and out (RFID).

*Ergonomic consultant report for 1st Floor Remodeling Project & Dept. of Public Health staff

3/02/04

RFID COST FACTS

Proposed SFPL Implementation

Year 1	Tagging of 1st floor material, all new material and all media Main self-check, staff & conversion stations, security gates & readers Equipment and tags for Excelsior Branch Library	$580,182
Year 2	Tagging of remaining Main collections Additional equipment and security gates Maintenance charges	$472,155
Total		$1,052,337

Estimated cost of converting 8,000 square foot branch with a collection of 35,000 items	$85,000

RFID tags combine functions of current barcodes and security strips into one tag. Tag costs are higher than current barcode/security strip costs but are decreasing.
Media RFID tag - $1.45 Media barcode/security strip - $.974

RFID self-check stations cost less than current equipment.
RFID self-check station - $9,000 3M self-check - $22,000

Funding to provide security strips, barcodes, security gates, check-out stations and maintenance is included in the Library's current operating budget to support the RFID implementation or to continue the current system.

Mitigate worker's compensation payments from RSI (repetitive stress injuries) - $265,000 from 1/01- 1/04. Create safer work environment to prevent further injuries.

SFPL 3/4/04

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
March 4, 2004
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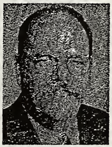
RFID: Helpmate or Conspiracy?

by MICHAEL SCHUYLER



> OME WATCHDOG GROUPS CLAIM THAT RFID TAGS HERALD THE END F CONSUMER PRIVACY. I SAY RFID USAGE IN LIBRARIES CAN KEEP RECORDS MORE PRIVATE HAN IN THE PAST.

RFID, Radio Frequency Identification. If it weren't for the coiled antenna on the tags you would hardly be able to see them. Place your library card and a stack of books in close proximity to an RFID reader and your books "automagically" check out. Take inventory with a wave of a wand. Sort books by subject without human intervention. Experience courteous and efficient self-service, made possible by a chip no bigger than a grain of sand.

But wait! Don't you know? RFID is a conspiracy. It's been called "the worst thing that ever happened to consumer privacy" by CASPIAN: Consumers Against Supermarket Privacy Invasion and Numbering. They tell all the sordid details at http://www.nocards.org. They envision a "marketer's war against consumers" led by RFID technology tagging everything we buy, everything we wear, and, more to the point, everything we check out of our local libraries.

Whoa! How did we get from WalMart to the local story lady? The Electronic Frontier Foundation ("Defending Freedom in the Digital World") has written to the San Francisco Library Commission deploring even the mention of RFID in the library's long-range plan. The group writes, "EFF opposes any use of RFID technology unless the planned implementation includes mandatory deactivation ("mandatory kill") of the RFID tags at the point at which the patron leaves the library" (letter dated 10/1/2003 available at http://www.eff.org).

One would have hoped that an organization such as EFF, which bills itself as technologically savvy, would have understood that "killing" an RFID tag as it leaves the library is the same thing as ripping off the bar code, thus leaving no way to track the material. But it might be worthwhile to examine what all the fuss is about and to suggest a solution, at least insofar as libraries are concerned.

It Was Once Worse

Libraries have actually come a long way in protecting the privacy of patrons. It didn't used to be that way, and it is technology that has made it all possible. In the first library where I worked, the patron wrote his or her name down on a book card. The book card contained the call number, author, and title at the top, plus a complete record of who had checked out that particular copy. Upon checkout the card was replaced by a date due card, but when the book was returned, the book card was re-inserted before the book was placed back on the shelf. Anyone browsing the collection could instantly tell who had checked out any copy. Indeed, an entire record of all patrons' reading histories existed in the stacks as sort of a loose database of cards and pockets.

The second library where I worked used a variation on this scheme. You wrote the library card number on the book card. I remember helping patrons at circulation and often seeing people check out the same book over and over as they hauled out stacks of mysteries and westerns they had already read. It was obvious because the library card number stayed on the book card itself, once again a history of circulation for that item.

The third library had yet another variation. In this scheme we used Gaylord "kerchunker" machines. That was library "automation" for the time. They plugged in. A solenoid slammed the metal date bar on a card as it tore off a hanging chad. The chads occasionally caught fire, which burned the rubber on the solenoid and caused an awful stink.

The patron signed a signature sheet next to a number. That same number was punched onto the book card along with the due date by the "kerchunker" and filed away. The number was impermanent in that it wasn't assigned to a single person. You could trace the history as long as you kept the signature sheets, which were in the large file cabinets behind the circulation desk.

Bar Codes (and RFID) Actually Help Privacy

It wasn't until the advent of bar codes that this vast database of circulation history effectively disappeared. We all insisted on it in our RFPs. The systems were to erase any link between borrower and book upon a successful check-in. That's true of bar-code-based systems today. It's also true of RFID systems.

The only way you can trace an RFID number back to the borrower is by accessing the circulation records as long as the material remains checked out. That's true of bar codes as well. In both cases, the number on the bar code or RFID tag has little meaning by itself. If you know the structure you can identify the library where the bar code came from and the fact that it is an item or patron code, but beyond those two points there is nothing that identifies subject matter.

So follow the scenario of privacy invasion. Somehow the Bad Guys have to be waiting outside in the library parking lot or maybe at the door of a supermarket. Note that these "Bad Guys" aren't garden-variety criminals. By definition they are institutional, either government agents of some sort or marketing types intent on deciphering our habits well enough to sell us more stuff and control our behavior and spending. In any case, they zap our bags with high-performance readers. Those aren't invented yet. The readers have a range measured in inches, but they *could* be invented, probably, at least some people think so, therefore it's still a problem.

> *"IF THE BAD GUYS ARE INTENT ON SCANNING YOU, THE LIBRARY IS LARGELY IRRELEVANT."*

Now the Bad Guys have a record of what amounts to a bar code inside an RFID tag. Nothing much else will fit so there's no room for titles and other identifying information. Being really smart guys they immediately decipher that this tag belongs to Geoduck Public Library, so they call up Geoduck's OPAC from the convenience of their lair and look up the material by bar code number. They figure out the books checked out have to do with a subject in which they are interested, so they revel in their success.

If I were a Bad Guy, I don't think I would bother with all that. I'd just trot down to Geoduck Public and present the director with a subpoena based on the USA PATRIOT Act. I'd find out what my suspect had currently checked out and be on my way. If the PATRIOT Act provisions get repealed, I'd just get a regular subpoena, which I could have done all along anyway, and get the same information. That's a lot easier than using all this technology.

I was discussing this issue with Mike Bloomberg of Augsburg College on the SYSLIB mailing list and he pointed out that none of this is necessary at all. In a world filled with RFID tags you just scan the ISBN number of a book, checked out or not, and tie that to the RFID tag on your driver's license. The ISBN number is meaningful because it ties directly to a unique title and publisher. Unlike a bar code number, which is randomly assigned to material, the title is built into the tag. If the Bad Guys are intent on scanning you, the library is largely irrelevant.

The EFF is not deterred by the fact that killing RFID tags won't work for a library that is in the business of tracking items from cradle to grave. It just changed reasons why you shouldn't use them. In discussing the plans of the Berkeley library using RFID tags, it said, "Libraries can be the poster children for RFID. People will think if they're OK here, they're OK anywhere else" (Lee Tien, EFF, quoted in the *Berkeley Daily Planet*, 10/10/03).

What is implicitly true in Tien's statement is that libraries are a small part of RFID. It's already everywhere. Do you have a late-model car with one of those key chain buttons that unlocks your door for you? That's an active (as opposed to passive) RFID tag. The key you use to turn the ignition also has an RFID tag inside that interacts with a reader in your steering column. If it doesn't match, the car won't start. RFID is used in some filling stations (soon at a convenience store near you) and to pay bridge tolls for commuters with a "Fast Track" pass.

Subscribe to GM's OnStar, use a GPS navigation system in your car, or turn your cell phone on and the Bad Guys know right where you are all the time. If you are wanted by authorities and you use your credit card, the police are notified. Obviously, those finding themselves in such a situation should use cash only.

The point here is that tracking technologies are already deployed and could

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be used even though they might not be today. That's an argument against the PATRIOT Act when it was revealed that it had not been invoked. It remains a "blank check" that has not yet been cashed, therefore it is still a problem. RFID tags, by definition, are a problem.

Here's How RFID Could Possibly Work in Libraries

The fact is RFID is coming. It doesn't matter how many people stand out in front of Safeway bemoaning the Club Card tracking their potato-chip-buying habits. These tags will become so cheap and track their products so well that they will replace bar codes, by and large, by the end of the decade. Libraries are already installing them. Maricopa County is in the midst of implementing. Seattle Public will have them on opening day. Dozens of libraries around the country are already up and running.

So what can we do?

First, turn off bar code indexes for the public. I know it's a stretch, but we're not talking about reality here. We're talking about possibility, the infinite reach of creativity applied to the what-if statement, and no small amount of paranoia. Let's just admit that and see if we can fix it.

Second, establish a library standard that does not allow for RFID tags that can hold more than a standard bar code plus a security bit. That means no RFID tags that hold checkout histories, bibliographic information, or anything that would identify the book itself and be subject to scanning.

Bar codes themselves are random and mean little. Keep it that way. The systems today very likely meet that standard, though 3M's 256 bits bears checking. One of the negative points touted today is basically, "Well, yeah, today. But tomorrow that can change!" Fine. Create a standard that insists this doesn't proliferate. Make it an RFP point.

Establish a testing system to ensure vendors are supplying the type of RFID coding above. This "quality assurance" could guarantee vendors are conforming to the standard. Random checks of installed systems would ensure compliance and provide "certification." This would certainly help assure most citizens.

I believe the RFID ISBN is going to happen for economic reasons. Therefore, establish a method of disabling ("killing") ISBN tags as part of the library processing step. My guess is you could create a portable and easily used "scanner" that could zap the ISBNs prior to final processing. Or stick the books in the microwave for a few seconds. You would essentially be replacing an *identifiable* RFID ISBN tag with a *random* bar code that means nothing out of context of the library's ILS. How's that for a proactive approach?

Lastly, have library privacy policies that specifically address RFID technology and explain how the library is protecting privacy, addressing some of the issues above.

If you did all this you would have a situation where libraries were the one place you could check out a book and *not* have it be trackable. Technically, it fixes the problem. It doesn't fix the issue that EFF has, which is that if someone sees libraries using RFID tags they will think it is OK, but I see no real difference from the government telling me what I ought to be worried about as opposed to the EFF telling me what I ought to be worried about.

By adopting policies and procedures as outlined above, libraries might be able to influence bookstores and other outlets to do the same. That would put librarians at the forefront of solving this problem in a positive way. It could even influence the consumer market as well. ■

Michael Schuyler is deputy director for the Kitsap Regional Library System in Bremerton, Wash. His e-mail address is michael@krl.org.

Technically Speaking

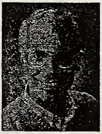
RFID Poses No Problem for Patron Privacy

by David Dorman

A recent onslaught of articles coming out of California newspapers reported on the use of Radio Frequency Identification (RFID) tags in public libraries and how they will strip away the reading privacy of library patrons (See News this issue). The concern has even been picked up and professed by some librarians who should know better. The devil, as always, is in the details. And the critical detail with respect to library use of RFID tags is that only two types of information are contained in these tags. One is a single bit (on or off) indicating whether the book has properly left the library. Pretty harmless, that.

The other is a set of fields designed to hold information about the book itself. Library RFID tags do not contain any patron information whatsoever. And most RFID implementations contain only one field of information about the book—the bar code number.

Forgive me for being skeptical of all the hullabaloo, but I just can't get too worked up about a library book broadcasting its bar code for several feet to any and all who care to lug around portable RFID readers and eavesdrop on the reading habits of passersby carrying library books. However, if that thought bothers some folks, I recommend they campaign for encrypting the barcode number in the RFID tag rather than foment (or buy into) vague apprehensions about a very useful and rather benign library inventory control tool. For a well-written, thorough, and balanced treatment of RFID and Patron Privacy, check out the paper "Personal Privacy and the Use of RFID Technology in Libraries" by Vinod Chachra and Daniel McPherson at www.vtls.com/documents/privacy.pdf.



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RFID privacy scare is overblown
NOVEMBER 24, 2003 (COMPUTERWORLD)
Opinion by Jay Cline

The privacy scare surrounding radio frequency identification (RFID) tags is greatly overblown. No company or government agency will be secretly scanning your house, as is feared, to find out what products you've purchased. There is no feasible way to do so. But if RFID chip makers don't soon allay these fears, the escalating public emotion around this issue may effectively ban the most valuable implementations of this remarkable technology.

What are these mysterious devices? An RFID tag is a microchip the size of a grain of sand that transmits information to a nearby scanner. Typical chips store 96 bits of data and transmit a 125-KHz RF signal. Experts say that capacity is enough to send a product serial number to a scanner a few feet away. Although this capacity is limited, many companies see a revolution in the making. Hospitals imagine a day when RFID tags will prevent medical errors by transmitting the correct medicine dosages to nurses. Automakers hope similar tags will be able to transmit wear-and-tear information on vehicles before serious problems occur. Postal services see speedier parcel scanning and tracking. Appliance makers and food producers envision faster and more targeted recalls of defective products. Clothing and shoe stores expect faster customer service as RFID tags help identify items of the right size. Clothes manufacturers hope the tags will be able to tell washing machines how to best wash items. The music industry sees the technology reducing piracy, and the federal government hopes RFID tags will help combat counterfeiting and speed bag-checking at airports.

Sound too good to be true?

Wal-Mart Stores Inc. and the Pentagon don't think so. They're counting on savings of several billion dollars that RFID tagging will bring them in the form of lower inventory-management costs. Items will no longer need to be individually hand-scanned, expediting product loading, invoicing and customer checkout. Scanners might be placed on shelves to speed restocking and at building exits to prevent theft. These lucrative benefits prompted both organizations to announce recently that their suppliers must tag their cases and pallets with RFID chips by January 2005 in order to continue doing business with them.

The story gets better. Analysts see these dual mandates causing a domino effect throughout the world economy. Procter & Gamble Co. -- which sells 17% of its goods through Wal-Mart -- expects pallet-level tagging to improve the speed by which it replaces out-of-stock products. P&G sees the technology boosting total revenue by $1.2 billion per year, nearly a 3% increase. Accenture Ltd. estimates that RFID adoption will cause retailers to enjoy an average 3% climb in revenue. Japanese analysts project a worldwide benefit of $276 billion by 2010.

So what's the problem?

Privacy advocates are concerned about tags on products continuing to emit signals in the parking lot, on the road and at home. They're worried that by using charge cards or loyalty cards during checkout, customer identities could be written to the tags. In the worst scenario, they imagine stalkers and thieves scanning cars and homes for expensive goods and personal information.
Some companies are already experiencing a customer backlash with their product-level tagging trials. Customers of a New York clothing store recently reacted against the prospect of their clothing sizes being beamed into the air. Wal-Mart reportedly had to cancel a pilot where it tagged packages of high-end razor blades because of strongly negative consumer feedback.

Stories of person-level tagging have only heightened fears of a Big Brother world coming to fruition. In Mexico, some children have reportedly been implanted with RFID chips under the skin so they can be tracked if they're kidnapped. A company in Brazil has supposedly implanted chips into the skin of its employees as their means to gain building access. Closer to home, a school in Buffalo is requiring students to wear RFID-tagged badges around their necks to track arrival times, and a prison is using RFID wristbands to monitor inmates. Some have speculated on the benefit of implanting in people RFID chips containing their medical and criminal histories. With friends like these, does Wal-Mart need any enemies?

The hype around RFID systems has certainly outpaced reality. Manufacturers and retailers have yet to agree on a universal electronic product code, the RFID equivalent of the Universal Product Code used in bar codes. RFID scanning is also far from error-free. But more importantly, RFID signals are so weak that they're easily blocked by metals and dense liquids. It's completely infeasible today for a vehicle to pass down your street and intercept signals from RFID-tagged goods inside your home.

The economics of RFID chips are also limiting how they're used. The most basic read-only chips cost 5 to 50 cents apiece. More complex chips that are read-write and have a wider broadcast range can cost several dollars each. Until these prices approach a penny, RFID chips will be mostly used at the case and pallet level, clear of any personally identifiable activity. Because of these technology and cost limitations, the world will have several years to identify the privacy controls we want to see in RFID systems.

Several companies are already creating these privacy controls. In recent meetings, chip makers and users discussed how the universally accepted principles of data privacy could be built into the RFID process. A top priority was notifying customers that certain items were tagged with these transmitters. The companies discussed accomplishing this by adopting a common RFID logo to place on product packages. To give customers the ability to turn off the transmitters, the firms plan to make them peel-offs. RSA Security Inc. is also developing a chip that could be worn on watches or bags that would block nearby RFIDs from transmitting certain information. All in all, the RFID privacy ball is rolling.

The gathering storm against RFID tags may soon outpace these positive efforts and make product-level RFID tagging taboo. RFID makers and users should take a time-out from their technical discussions and start talking more with the public about what's going on. Their dreams of big economic returns may well depend on it.

HE FINANCIAL PAGE

Z DOES IT

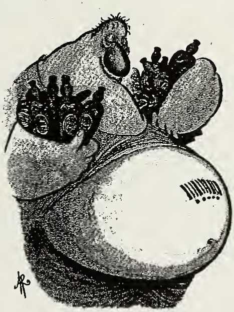
Among the three million or so items in the Smithsonian's National Mu- eum of American History is a ten-pack f Wrigley's Juicy Fruit gum, which was ld for sixty-seven cents at the Marsh upermarket in Troy, Ohio, in 1974. The um was ordinary enough, except for one ing: this was the first item ever to have s bar code scanned at a checkout counter.

Three decades later, the bar code seems dispensable. Five billion items have eir bar codes scanned each day; those tle swatches of numerals and lines are ubiquitous that they're practically in- sible. Companies rely on bar-code data keep their shelves stocked and their ventories lean. And yet, to hear those mpanies tell it, the bar code's expira- on date may be nigh.

That's because a successor has emerged, echnology called radio-frequency iden- ication (R.F.I.D.), which relies on a mputer chip and can convey far more formation than most bar codes. Inte- ted into the chip is a little antenna that mits the information via radio waves. may already be using R.F.I.D.—for ample, if you have an EZ-Pass, which ables your car to zip through a toll oth without stopping. Farmers use F.I.D. tags to keep track of cattle. anufacturers use them to track high- iced components. Mobil Speedpass stomers use them to buy gas. But some the biggest companies in the world ve grander ambitions: they envision a ure in which R.F.I.D.s are embedded everything we buy—every can of soda, x of detergent, and pair of shoes. Prod- ts will be tracked continuously, from tory floor to checkout aisle. Checkout ll take only seconds. There will be no re shoplifting or shipments that fall trucks or items that are out of stock. ventory will flow like water in a moun- n stream. Or so the story goes.

Companies like the idea of R.F.I.D. cause, even in this technology-rich onomy, making and selling stuff is rder than it ought to be. In a typical eight per cent of the items are out k—at any moment thousands of ucts that customers want are piled up in back rooms or warehouses. In economics textbooks, supply flows in a smooth and orderly fashion, but in the real world it's often a panicky mess of misplaced inventory and mistimed forecasts.

In the sixties, a group of researchers at M.I.T. devised a simulation called the beer game. Participants play one of four roles: the brewer, the distributor, the wholesaler, or the retailer. (No one, sadly, gets to be the customer.) The retailer, who knows how much beer has been consumed in a given week, orders from the wholesaler, who orders from the distributor, who orders from the brewer. The goal is for everyone to have enough beer to satisfy demand but not so much that it can't all be sold. Sounds easy enough. In fact, soon after the game starts, chaos erupts. Instead of a nice, even flow of beer, you get wild oscillations; the players veer from having too much beer to too little, and back again.



ARNOLD ROTH

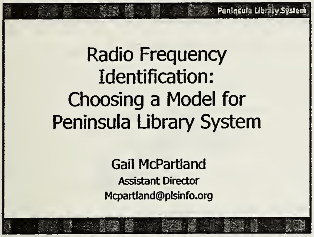
The beer game demonstrates what's often called the "bullwhip effect," whereby a small change at one end of the supply chain—a minor spike in demand for Sam Adams—causes much bigger changes at the other. Manufacturers and distributors often have only a dim idea of what consumers are buying; the uncertainty gives rise to overreaction. A classic example comes from Procter & Gamble's experience in the diaper business. The demand for diapers stays pretty constant, since the number of babies doesn't change much from month to month. But P. & G. found that even small variations in the number of diapers sold by retailers led to wild swings in the number of diapers that it was making and that distributors had on hand.

The bullwhip effect is a result of bad information. So an obvious solution is to make the information better—to let everyone know what's happening as it's happening. That's where R.F.I.D. comes in. Bar codes are cumbersome and passive: they won't tell you anything unless you scan them by hand. An R.F.I.D. tag can effectively act on its own. Promoters of the new technology—most notably the Cambridge-based Auto-I.D. Center, a partnership of five research universities and almost a hundred major companies—predict that a store's products will keep up a constant chatter ("Hey, I'm expiring over here!" the carton of milk will say) and let distributors know when stock is getting low. The data will be collected online instantaneously; the result is what's known, in *Business 2.0*-speak, as "instant supply-chain visibility."

Before any of this can happen, R.F.I.D. technology needs to get a lot cheaper, and its boosters need to assuage the privacy concerns of people who are leery of a little chip that could enable someone to track every bottle of pills in their medicine cabinet. (The Auto-I.D. Center insists that tags will be "killed" at the checkout counter, as clothing sensors are.) Earlier this year, though, Wal-Mart announced that it was requiring its top hundred suppliers to use R.F.I.D.s on their supply pallets by 2005. And where Wal-Mart goes, just about everybody soon follows. As it happens, the bar code became a mainstream success only after Wal-Mart adopted it, in 1980.

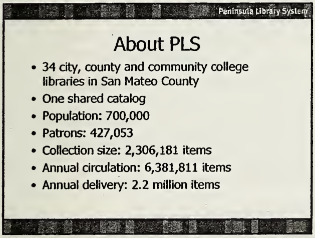
Wal-Mart is already the world's most efficient retailer. It may know more about what's on its shelves, and keep its supply chain running more smoothly, than any big chain in the world. But, like every other company these days, it is under constant pressure to become more productive. For all its power, Wal-Mart makes less than four cents on every dollar of sales. Major supermarkets make less than two cents. So even if R.F.I.D. will save only a few cents on each item sold, it's an innovation that Wal-Mart and its competitors have to have. A few pennies here and a few pennies there, and pretty soon you're talking about real money.

—*James Surowiecki*



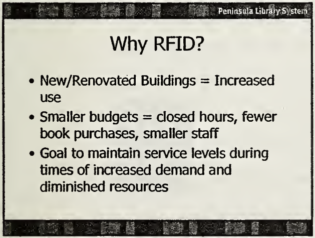
Radio Frequency Identification: Choosing a Model for Peninsula Library System

Gail McPartland
Assistant Director
Mcpartland@plsinfo.org



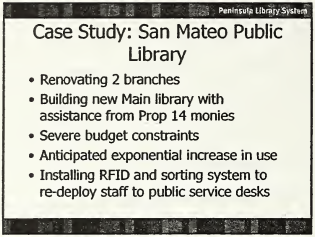
About PLS

- 34 city, county and community college libraries in San Mateo County
- One shared catalog
- Population: 700,000
- Patrons: 427,053
- Collection size: 2,306,181 items
- Annual circulation: 6,381,811 items
- Annual delivery: 2.2 million items



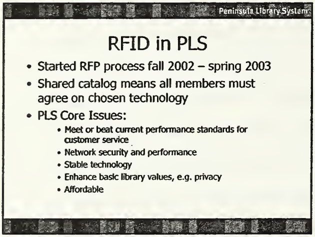
Why RFID?

- New/Renovated Buildings = Increased use
- Smaller budgets = closed hours, fewer book purchases, smaller staff
- Goal to maintain service levels during times of increased demand and diminished resources


Peninsula Library System

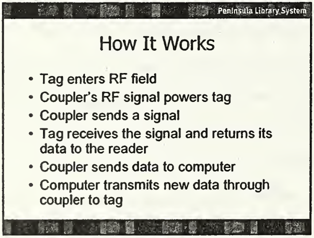
Case Study: San Mateo Public Library

- Renovating 2 branches
- Building new Main library with assistance from Prop 14 monies
- Severe budget constraints
- Anticipated exponential increase in use
- Installing RFID and sorting system to re-deploy staff to public service desks


Peninsula Library System

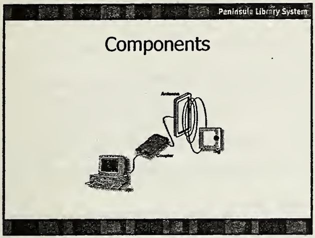
RFID in PLS

- Started RFP process fall 2002 – spring 2003
- Shared catalog means all members must agree on chosen technology
- PLS Core Issues:
    - Meet or beat current performance standards for customer service
    - Network security and performance
    - Stable technology
    - Enhance basic library values, e.g. privacy
    - Affordable


Peninsula Library System

How It Works

- Tag enters RF field
- Coupler's RF signal powers tag
- Coupler sends a signal
- Tag receives the signal and returns its data to the reader
- Coupler sends data to computer
- Computer transmits new data through coupler to tag



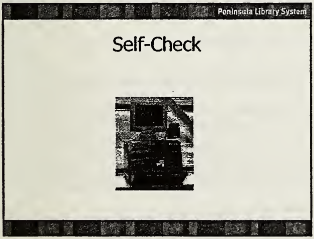
Peninsula Library System

Components

Peninsula Library System

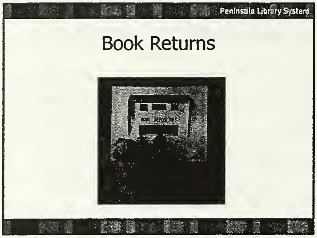
Other Components Add to Effectiveness

- Self-check
- Book returns
- Sorting Systems
- Inventory control wands



Peninsula Library System

Self-Check



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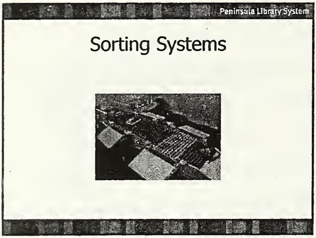
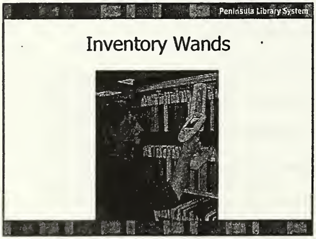
Book Returns



Peninsula Library System

Sorting Systems



Peninsula Library System

Inventory Wands

Peninsula Library System

Benefits

- Fewer repetitive strain injuries to library staff
- Improved use of self-check
  - Multiple items can be passed at once
  - AV and magnetic materials are safe
- Items can be checked-in automatically at book returns
- Doesn't require line of sight for check-in, check-out or inventory control

Peninsula Library System

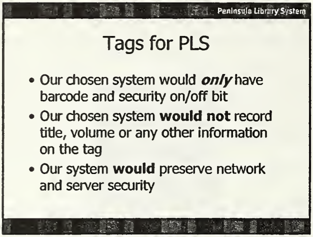
How It Works

- No industry standard, BUT...
- Tags are 13.56 MHz for all vendors
- Security gates are still 36" apart
- Read range for tags is extremely limited
- Information on tag determines how effective it is as a security device....

Peninsula Library System

The Tags are the Key

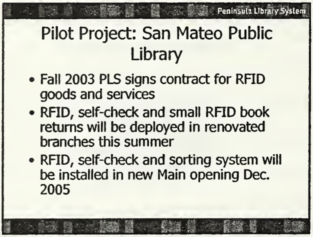
- All vendors except one, put the barcode on the tag
- Some tags have security bit that turns on/off when items are checked in or checked out
- Some tags have title and volume information and use other methods for security



Peninsula Library System

Tags for PLS

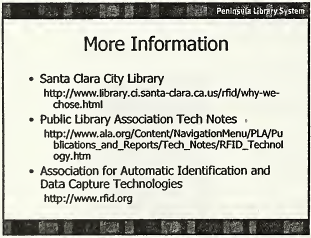
- Our chosen system would ***only*** have barcode and security on/off bit
- Our chosen system **would not** record title, volume or any other information on the tag
- Our system **would** preserve network and server security



Peninsula Library System

Pilot Project: San Mateo Public Library

- Fall 2003 PLS signs contract for RFID goods and services
- RFID, self-check and small RFID book returns will be deployed in renovated branches this summer
- RFID, self-check and sorting system will be installed in new Main opening Dec. 2005



Peninsula Library System

More Information

- Santa Clara City Library
  http://www.library.ci.santa-clara.ca.us/rfid/why-we-chose.html
- Public Library Association Tech Notes
  http://www.ala.org/Content/NavigationMenu/PLA/Publications_and_Reports/Tech_Notes/RFID_Technology.htm
- Association for Automatic Identification and Data Capture Technologies
  http://www.rfid.org

It all adds

with Ai

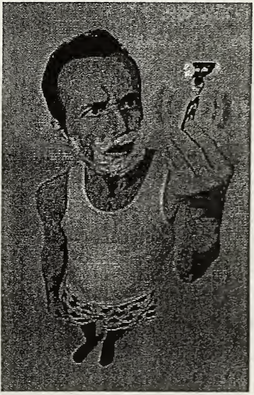
FEATURE ARTICLE

COVER STORY

They Know Where You Are

New technologies can pinpoint your location at any time and place. They promise safety and convenience—but threaten privacy and security

By Jay Warrior, Eric McHenry & Kenneth McGee



The terrorist blast had destroyed the office building. Piles of glass and concrete littered most of a city block, the air was thick with dust, debris still smoldered. The police had no suspects but had already sent out an all-points alert. Then, when troopers pulled a van over for making a couple of risky lane changes, they found a pile of fertilizer sacks and an empty fuel-oil drum in the back. A duffel bag held a change of clothes, a small kit with a new razor and other toiletries, and a .45-caliber pistol. The truck had been stolen, and the driver wasn't talking.

Within an hour, some 1000 km away, an FBI team walked into a Wal-Mart with pictures of the arrested man. One of the cashiers recognized the face. "There were four of them," she said. "One of our regular customers said they were friends visiting from out of town—but that guy's a loner. He lives out on County 15."

This may sound like the start of a mediocre TV drama. But given recent events—and coming technical advances—it just might be a scenario pulled from tomorrow's news. Here's the rest of the story: a bit of microcircuitry called a radio frequency identification (RF-ID) tag was embedded within the package of razor blade cartridges in the suspect's toiletry kit. The manufacturer inserted it into that package, and all others of its kind, to let retailers track inventory cheaply and conveniently. But because the tag carried a unique identifying code, the FBI could scan it, check it against a database, and then track down the store where the razor was purchased.

The future, in this case, is already here. This past January, the Gillette Co. (Boston) announced that it would purchase up to half a billion RF-ID tags to put on its Mach3 and Venus razors and razor blade packages. The tags, which contain chips that respond to an RF field from a scanner, are now being used in a test by Wal-Mart Stores Inc., by the UK-based grocery chain Tesco PLC, and most recently by Metro AG, Germany's largest retailer, to determine whether the technology can streamline inventory management and save retailers billions of dollars a year in supply chain costs.

It's not much of a stretch to imagine this relatively benign way of tracking goods being put to other, more dramatic uses. Indeed, RF-ID tags are only one example of a coming wave of wireless communications technologies that will be everywhere in the next year or two, merging location and time-related information.

The most spectacular of these will be large-scale systems that piggyback on cellular networks to locate any cellphone on the network—in other words, in the near future, your whereabouts won't be a secret if you are carrying your cellphone. Other plans revolve around smaller-scale technology that will, for example, let you buy an item merely by pointing at it with your cellphone.

The commercialization of these technologies promises to make your life safer, easier, and more enjoyable by providing instant, personalized information. It might even save your life by helping rescue officials find you in an emergency, no matter where you are.

But these benefits will almost certainly cost you some privacy. In the case of the tagged razor blades, the loss will be small and incremental; with cellphone tracking, it could be substantial and potentially intrusive. So, in coming months, expect some clashes as watchdog groups, businesses, and governments try to find common ground and deliver the benefits of location tracking with the least possible intrusion.

Enhanced 911

The current push for location-based services in North America started in 1996, when the U.S. Federal Communications Commission (Washington, D.C.) passed its much-debated Enhanced 911 (E911) mandate. This rule, revised in 1999, requires wireless carriers to be able to locate, within 50 to 100 meters, any wireless phone calling 911, the U.S. nationwide emergency service number. The object is to let emergency operators pinpoint where a call comes from so that responders can find you if you don't know your location, cannot speak properly, or get cut off. U.S. wireless operators currently have until December 2005 to comply with this proviso.

In the meantime, rollout of the capability has already begun in some places. Since late 2002, for instance, the entire Sprint PCS network has had an emergency locator capability. Another network, Cingular Wireless, has successfully tested a location technology in Wilmington, Del.

This location technology requires few modifications to cellphones. Location methods may, but often do not, make use of information from the Global Positioning System (GPS), the constellation of U.S. military satellites that are used to guide everything from bombs to ordinary passenger cars. Exactly how the location technology is implemented depends on the underlying cellphone network.

In Europe, the prevailing cellular standard is the Global System for Mobile Communication (GSM), which is also now taking root in the United States. For GSM networks, the location technology of choice is called Uplink Time Difference of Arrival. This technology depends on a form of triangulation: it requires at least three cellular base stations to receive a signal from the wireless handset, and then computes the location from the differences in arrival times of the three signals. Accuracy is best in urban areas of dense base-station coverage. The technique does not require that subscribers buy new handsets, and it does not affect network performance.

A drawback is that location measurement units costing as much as US $10 000 must be installed at each base station. The dominant cellular technology in the United States, time-division multiple-access (TDMA), also typically uses the Uplink Time Difference of Arrival method for determining location.

Meanwhile, code-division multiple-access (CDMA) networks, which is a spread-spectrum method of communications that is making inroads into TDMA, are turning toward a location technology called Assisted GPS, which, as its name suggests, makes use of the satellite network.

With this method, the wireless carrier or an independent GPS reference data-feed service sends "hints" to the mobile phone via the network, using information from GPS receivers deployed at the various cell sites. These hints suggest the GPS satellites that will give the quickest fix on the position. These hints are particularly necessary when the phone is indoors and GPS reception is more limited.

A server and GPS receiver must be installed at each cell site, for a total cost of $2000 per site. A GPS receiver is also built into each handset. Accuracy is good outdoors, particularly in rural or suburban areas, where satellite signals can be received easily, but may be poor indoors, where satellite reception is obstructed, and in urban areas. Examples of networks using this technology include those operated by Sprint PCS, Verizon Wireless, and Nextel Communications.

The benefits of location technology aren't limited to subscribers—it will also help wireless carriers improve their systems, by making every enabled handset an instrumentation probe. The handsets will be able to provide information on signal quality by geographic location, providing instant information on problem areas. Today, technicians gather that kind of information by driving to specific sample sites and making measurements, a time-consuming and inefficient solution.

For now, mandating mobile location service is strictly a North American phenomenon. In Europe, the 911 equivalent, 112, is currently available only on wire-line telecom networks, but beginning 24 July 2003, both wire-line and wireless carriers will legally be required to deliver location information on 112 calls—Enhanced 112 (E112). There is no accuracy or technology mandate in delivering this capability; carriers need only do whatever is technically feasible for their network.

So most European Union wireless carriers will use Cell-ID positioning to fulfill these requirements. This very basic form of location technology uses the latitude and longitude of the cell site handling the call as an approximation of the phone's position. The level of accuracy depends on the size of the cell site's coverage, and varies from hundreds to thousands of meters.

Pay by phone

Though North America is forging the way in emergency aspects of cellular-based location technology, it is lagging behind Europe, and especially behind Asia, in commercial uses. For a glimpse of what's to come, consider Tokyo, where a cellphone is, well, more than a cellphone. Sitting in your car, you can easily use it to get localized traffic updates, weather reports, street-by-street navigation assistance—and even find out the location of the nearest Starbucks [see diagram]. Coming soon in various regions (for better or worse): you will be able to opt in for personalized advertising—instant notification, for instance, as you walk by your local drugstore, that your favorite brand of toothpaste is on sale.

Vending machines present another world of opportunity. Imagine being able to walk up to such a machine and buy something with a few keystrokes on your mobile handset. No bills or coins or ATM or debit cards are needed. All that is required is a network precise enough to recognize your location relative to the vending machine and a micro-billing system to debit your bank account or add to your cellphone bill.

Coming soon (for better or worse): opting in for location-based personalized advertising

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To create a seamless, easy-to-use vending system that allows cellphone billing, however, the 50- to 100-meter accuracy of the coming cellular location technologies won't be good enough. Trying to find out what is good enough, wireless carriers in Europe and Asia are running several trials using hybrid approaches such as toll-free numbers to call in machine identification information or scanners on vending machines for bar codes displayed on the phone screen [see diagram]. But developing and implementing the infrastructure—the compatible vending machines and handsets, the more sophisticated location technology—won't be cheap. And billing and roaming arrangements will be complex.

In the interim, however, a number of smaller-scale—and cheaper—technologies can position people and objects even more precisely than cellphone-based systems, but they work over much shorter distances—that is, from just a few meters to a few hundred meters.

Near instead of far

What good are they? Suppose you want to make sure your child doesn't stray too far from you in a crowded store. Or suppose a hospital wants to know where the nearest doctor is. Or perhaps your smart house needs to know who is in what room so it can adjust the temperature settings to an individual's personal tastes. Applications like these require precise, but short-range, location sensing.

One solution being considered for distances under a kilometer is ultrawideband, a technology that works by broadcasting many short data pulses over a wide spectrum of frequencies. It is a fairly simple technology to implement, and provides excellent accuracy in the range of half a meter to 10 meters. Potentially, it could be used up to hundreds of meters under current licensing.

In commercial applications, ultra-wideband receivers about the size of cigar boxes and costing, at this early implementation point, around $2000 could be positioned throughout a busy facility such as a factory or a hospital. The receivers would keep track of equipment and personnel, all of whom would be wearing small, low-power transponders not much bigger than poker chips and currently costing around $25 each. Parco Merged Media Corp. (Portland, Maine) currently offers hospitals a real-time location system similar to this.

Another ultra-wideband technology developer, Aether Wire & Location Inc. (Nicasio, Calif.), foresees its ultra-wideband "localizers" as coin-sized transceivers, accurate to within a centimeter at a distance of 1 km, embedded in personal safety devices (that child in the mall again). The company also projects using the receivers for such mundane operations as inventory control systems, and for such futuristic ones as "cybernetic servants" and autonomous vehicles guided by localizers placed along the side of a road.

Of course, lots of applications don't need localizing nodes with real processing power. Consider a scenario in apparel retailing. A woman walks into a dressing room carrying a dress. She tries it on and looks in the mirror. Meanwhile, a terminal in the corner of the room displays the dress with a variety of accessories. It has identified the dress using a pinhead-sized tag incorporated into the garment's label. This is exactly what Italian fashion designer Prada has operating in a dressing booth in a New York City store, where RF-ID tags are on all the clothing.

These RF-ID tags can be made much smaller and cheaper than ultra-wideband nodes, and they can be attached to just about anything. Each tag contains an antenna and a simple integrated circuit. It sends identification data in response to a query from a reader or scanner at distances of centimeters to meters. The tags can be passive, borrowing energy from the scanner's RF signal to send their reply, or they can be active, with battery power and the ability to transmit their own signals. While the tags use security codes and encryption, they can be as small as Hitachi's 0.4-mm^2 chip. Originally designed to operate at around 134 kHz, today they work in frequency ranges extending as high as 5.8 GHz for longer-distance applications.

Manufacturers like Gillette, the Gap, Marks & Spencer, and Benetton are already integrating these devices into labels, weaving them into fabric, or embedding them in paper or bindings. They cost about 50 cents today, and there's no reason why they can't cost 5 or 10 cents in a couple of years.

In an antitheft application, the tags send position information to scanners, which in this case do not need to be in the line of sight. The scanning system records the information and can send an alert, for example, if the tag is not properly deactivated when an item leaves the store.

In more customer-friendly applications, the same technology might be used to drive electronic displays—like the one in the Prada dressing room—or advertisements displayed on your grocery cart. Retailers can consider including other data in their systems, like credit card limits and past purchases. They can employ other technologies, like e-mail alerts via your cellphone, to provide such services as an instant discount on accessories to go with that new computer you just bought.

Big Brother?

Before we can enjoy these benefits, we'll have to work out some prickly privacy issues. The thorniest, arguably, concern the fact that location technologies can theoretically create a trail of what you've been doing and where you've been doing it. And if investigators bother to correlate information from different databases, the picture could be quite detailed.

Who should be allowed to collect this data, and when does it invade your privacy? What are the ethics of sharing this information? Should your health insurer have access to the fact that you drink an average of half a bottle of vodka a day? Should your employer know that your call to say you're too sick to come in to work came from a ski resort?

Someone with the ability to correlate large amounts of data—whether a business, health care provider, or government agency—might very well deduce more information from a system than was originally intended. Though database designers work hard to put checks in place, clever users who pose multiple questions always pose a threat.

For example, consider an electronic transponder-based toll collection business. This business uses sensors at tollbooths to track transponders and calculate the toll due. At the end of the month, the business sends the driver a bill. Concerned about privacy, the company, while it sells records of transponder numbers, locations, and times so that others can analyze traffic congestion, never associates transponder numbers with customer names and never makes that information available.

A credit card issuer, however, could buy that information and then correlate charges appearing on a customer's credit card with the cost of tolls incurred by the anonymous transponder number. By matching transponders with customers, the issuer can thus learn which customers are driving well over 15 000 miles per year and are good candidates for a low-interest-rate car loan. Here the correlation has completely bypassed the safeguards that the toll collection company thought it had in place.

And what will a service provider be obligated to do if a government agency demands data about someone's past purchases or travels? In the San Francisco Bay Area, the issue received national attention last year when the regional transportation agency proposed placing transponders in cars to provide data for a traffic management study. Opponents wanted to know what use would be made of data that indicated that a driver was speeding or driving in some way that might be construed as suspicious. A privacy plan to prevent this was quickly developed.

In some cases, the government has legislated the use of location technology in ways that could be construed as a violation of privacy. The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, enacted in November 2000, makes real-time tire-pressure monitoring compulsory on all cars produced in the United States, with some implementations required as early as this year. TREAD requires a tire-labeling system and associated record keeping that will identify individual tires. Tire companies such as Compagnie Générale des Établissements Michelin (Clermont-Ferrand, France) are already experimenting with embedding small RF transmitters with unique tire identification codes. These sensors can be read with a small handheld or curbside device. It's not much of a stretch to imagine the installation of monitoring systems in parking lots, ramps, and tollbooths to track the location of vehicles.

Generally, in the debate over the use of location technologies, several fundamental questions are being asked. For instance, what is being collected? An E911 system obviously must collect location information, but will that system also collect location information when you are using your phone for other calls?

Then, too, if you choose to use a commercial location service, is that service collecting your personal ID code or merely generic data that an unnamed person was at a specific location at a particular time? What information will officials keep, and how long will they keep it? Can they sell it to other companies? If so, what rights will you have to check information? What rights will you have to challenge the data gathered about you? Issues like these transcend location technology, challenging the meaning of privacy in our increasingly digital world.

In the United States, the FCC is not hurrying to address location-related privacy concerns. In July 2002 it rejected a petition from the wireless industry's Cellular Telecommunications & Internet Association (Washington, D.C.) calling for rules to govern the collection and use of location data generated by wireless communications systems.

The FCC's stated belief is that mandated and public safety services such as E911 will provide benefits exceeding the privacy concerns. It expects many services to be offered with an "opt out" clause allowing individuals to block knowledge of their location either permanently or temporarily. To a certain extent, this is happening with E911, as wireless carriers have discovered that continuous tracking of every user's phone would be too costly. Phones now will block transmission of location information except in the case of an emergency call.

The challenge for carriers will be to offer compelling commercial services with a believable guarantee of privacy and safety. Such services stand a better chance of becoming a "necessary convenience" that is part of day-to-day life.

The challenge for the rest of us will be to ensure that legislation and standards are put in place, making it possible to collect, store, manipulate, distribute, and maintain location information responsibly and preparing us to deal with the nuances and implications of the technology. Few people want Big Brother watching them—whether it's an unregulated wiretap, their favorite store bombarding them in the mall, or non-stop, personalized advertisements on their phone. The issue is not one of technology; it's a question of social maturity.

To Probe Further

The latest on E911 from the U.S. government's perspective is found at the Federal Communications Commission's Web site at http://www.fcc.gov/911/enhanced/.

A list of examples of how radio frequency identification (RF-ID) tags can be used for tracking everything from livestock to beer kegs—along with more mainstream applications, such as tagging airline baggage and hotel room keys—is available at http://www.rf-id.com/apps.htm.

PHOTO: GRAHAM FRENCH

URL: http://www.spectrum.ieee.org (Modified: 30 June 2003)

Electronic Frontier Foundation

Oct. 1, 2003

To: **San Francisco Public Library Commission**

Subject: **Privacy risks of Radio Frequency Identification "tagging" of library books**

The Electronic Frontier Foundation (EFF)[1] respectfully submits these comments and attached document to the San Francisco Public Library (SFPL) Commission with regard to Goal 16.1 of the SFPL Strategic Plan 2003-2006 (Aug. 21, 2003 Final Draft).[2]

Goal 16.1 states that the Library plans to "[i]nitiate implementation" of Radio Frequency Identification (RFID) technology for books and other library materials. Goal 16.1.2 states that the Library plans to "[i]ncorporate funding for implementation as part of the 2004/2005 Library budget process" with "[i]mplementation to begin in 2005/2006."

EFF writes to oppose the Library's plan to implement an RFID system for tracking books and other library materials. As we explain below, RFID technology raises great privacy concerns because insecure RFID tags will permit inventorying of people's possessions and tracking of people via their possessions. These risks are especially great where books and other reading materials are concerned, because both privacy *and* freedom of expression are at stake. Furthermore, we are doubtful that RFID technology will be more cost-effective than existing technologies and practices for check-out, inventory control, and loss prevention.

Libraries have long been very protective of library patron privacy given that surveillance of reading and borrowing records chills the exercise of First Amendment rights. In the famous *Tattered Cover* case, an American Library Association official testified about "the chilling effect that results from disclosure of library circulation records." The Strategic Plan itself notes that the Library "advocate[s] for and support[s] policies and procedures that protect privacy of all library user records." Concern for privacy of reading records has only increased with the enactment of Section 215 of the USA-PATRIOT Act, which allows the government to subpoena reading records while preventing libraries from saying anything about this invasion of patron privacy.

Accordingly, EFF opposes any use of RFID technology unless the planned implementation includes mandatory deactivation ("mandatory kill") of the RFID tags at the point at which the patron leaves the library. In our view, a "mandatory kill" policy is the only measure that would allow RFIDs to be used by the Library internally, while giving the public the necessary time to consider whether and to what extent they want RFIDs to proliferate.

EFF is very concerned that the Library may not have fully considered the privacy and civil liberties implications of implementing RFIDs and may not yet have received information or opinions about RFIDs from sources independent of the RFID industry. Our comments, to be sure, are tentative because we cannot tell from the Strategic Plan exactly what the Library intends or what RFID technologies are being considered. Has the Library already spoken to well-known vendors like Checkpoint or 3M? If so, have any decisions been made?

ndeed, we are concerned that the Library's plan to adopt RFID technology will unintentionally tend to legitimize RFID use in other parts of society. We fully expect that if the Library adopts RFIDs, the

RFID industry will use that fact as part of a public-relations effort to persuade the public that RFIDs are both innocuous and inevitable. *Business Week* has reported, for instance, that "rather than tailoring the technology to address [privacy] concerns," the RFID industry's public-relations firm Fleishman-Hillard "calls for a proactive plan to 'neutralize opposition' and 'mitigate consumer backlash.' The documents advise product spokespeople to emphasize the 'inevitability' of the technology and recommend characterizing RFID as a simple evolution of the bar code, rather than a new technology with futuristic capabilities."[3]

Thus, EFF strongly urges the Commission to reject Goal 16.1 of the Strategic Plan or, at the very least, to postpone adoption of RFID technology pending further study and research into its privacy implications and cost-effectiveness.

Discussion

Imagine a world where your every possession -- your clothes, your books, your car, your cash -- could be tracked with precision: a world where every citizen's purchases, movements, and activities could be monitored by marketers, snoops, stalkers, or even the government, at a level of heretofore-unimaginable granularity. The implications for personal privacy and free speech would be dire. Yet this is the world that will be created by RFID technology, if it is deployed without adequate regard for its social and political implications.

The basic idea behind RFIDs is simple: Tiny tags embedded into products would store information about the product as well as a unique ID number. Radio waves broadcast by RFID readers or scanners would make the RFID tags transmit that information. For businesses, RFIDs represent a "next-generation barcode" solution to the problems of inventory control. An entire warehouse could quickly be scanned to find out how many and what items it contains. RFIDs could also be used as nearly invisible replacements for anti-theft tags.

Unfortunately, RFID technology raises serious privacy problems outside the warehouse and sales floor setting. Because people carry or possess objects, RFIDs also allow people to be tracked via their things. As far as EFF has been able to determine, today's RFIDs are optimized for low-cost, high-rollout production; they are unobtrusive, "dumb," and lack any form of encryption that would prevent unauthorized persons from reading them. Thus, although future RFIDs may permit user control, it is our understanding that RFIDs will lack any information security or privacy safeguards for the foreseeable future.

Accordingly, RFIDs present at least two privacy risks. First, insecure RFIDs permit "inventorying": anyone with a compatible RFID reader can surreptitiously learn what RFID-tagged things you have or wear. Second, insecure RFIDs permit different kinds of "tracking." If an RFID contains information that identifies the person, the person can be tracked via the RFID.

Even if the RFID does not contain personally identifiable information, a person can be tracked through links to other records. If the government had access to a library's borrowing records, it could link a person to the books he or she has borrowed even if the RFID itself does not identify the person. As Beth Givens of the Privacy Rights Clearinghouse has observed,

> objects don't necessarily need to be matched with personal identifying information to be used for profiling and location tracking. Imagine a political demonstration in which thousands of people participate. As demonstrators mingle, law enforcement officers with hidden readers capture the unique RFID codes on clothing worn by the participants. Later, when participants perhaps pass through

checkpoints, board public transportation, or travel by airplane, the codes can be matched and demonstrators can be detained and/or then identified.[4]

It may be argued that these risks are speculative and hypothetical today. But there is nothing hypothetical about the fact that RFIDs make it easier to track things and people. And if there is one lesson society has learned from computerization, it is that technologies do not stand still. Any socially responsible technology policy must anticipate how technologies spread throughout society and grow in power.

EFF therefore believes that these risks will grow if RFIDs become more common. RFID adoption is being "pushed" from many directions. Governments are using or thinking about using RFIDs. The European Union is planning to use RFIDs in its currency, with obvious implications for financial privacy. The U.S. Postal Service is considering the use of RFIDs for "Intelligent Mail." This "I-Mail" initiative contemplates attaching to every piece of mail a unique, machine-readable identifier. Such identification would not only include postage amount and basic routing information, but the "digital signature" of the sender, including "name, address, or [even] biometric data" to convey the " 'who, when, and where' of the mailer." The implications for anonymous speech through the mails are obvious, too.

When today's consumers learn about plans to deploy RFIDs, they think about society will be like when RFIDs are widespread, and they make extremely reasonable assumptions about what both business and government will do with this power to track. It should therefore be no surprise that businesses like Wal-Mart, Gillette, and Benetton encountered significant public outcry when they announced plans to use RFIDs outside of the internal supply chain.

In fact, the RFID industry is well aware of these consumer privacy concerns; an industry document summarizing the results of focus-group research stated that "Virtually all groups spontaneously said they wanted a choice and that 'the chip should be able to be killed.'"[5]

Here are some consumer concerns, as described by RFID industry research:

1. Will individuals benefit?

"The store will benefit more than the consumer."

Study comment: "there are currently no clear benefits by which to balance even the mildest negative, so any negative press coverage, no matter how mild would shift the neutral to a negative."

2. Will RFIDs be misused?

"I am playing cynic for a moment, I can guarantee that they will be able to read through steel."

"I don't think it will be restricted to products. . . it will be linked to personal information."

"The limited range? I reject that promise. . . In the future, the technology will develop. It will leave you naked."

Study comment: "Their biggest concern is abuse."

3. Will individuals be tracked?

"I could be tracked by the clothes I'm wearing."

Study comment: "Clothing was a major inflamer. Consumers assumed that tags would be embedded into clothing .... Tagging their clothes was tantamount to tagging them personally. This was by far the greatest concern expressed in groups."

4. Will individuals be inventoried?

"I'd feel naked if people know what I'm wearing."

"Companies or the government will be able to monitor everything I buy and spy on me."

"Someone could see everything I buy by reading my trash."

5. "Personal security"

"muggers could know what is in my shopping bag or if I'm wearing a Rolex."

"the technology will improve to allow people to read through walls."

EFF reiterates that these consumer concerns are not limited to the here and now. When consumers think about RFIDs, they think about what will happen to their privacy and security if RFIDs and RFID readers become commonplace. The general public is acutely aware of how rapidly technology improves, and they know that privacy-invasive technologies often start small but usually spread more quickly than "experts" predict. The time to think about these privacy concerns is now, before RFIDs become part of the fabric of everyday life.

Contrary to popular belief, RFID technology is still in its infancy in consumer-facing applications. As a national newspaper recently reported, "Wal-Mart Stores Inc. and Gillette Co. abruptly yanked a pilot program for the technology" and quoted a Wal-Mart spokesperson as saying that it will be "many years" before tagging individual items is practical or profitable.[6] The Public Library Association of the American Library Association reports that "RFID systems are still relatively new in libraries" and that "[f]ewer than 50 had been installed as of the third quarter of 2001," with only two sites labeling more than one million items each.[7]

Finally, we are doubtful that it is worth it for the Library to implement RFIDs as a cost-saving measure given these privacy concerns. How much will this cost? Does the Library know how its contemplated RFID system will work? How much will RFIDs really facilitate users' self-service check-out of library materials as compared to existing barcodes? How much will RFIDs really improve inventory control or loss prevention over existing methods? How will they prevent loss? Has the Library been getting its information from RFID industry representatives, or has it consulted independent technologists? Has the Library performed a technology assessment? Is there any evidence that RFIDs will provide a net marginal benefit over less privacy-invasive technologies? The public deserves answers to these and other questions before, not after, the Library decides to use RFIDs.

Conclusion

EFF's general position on RFIDs is simple. Because they pose inventorying and tracking risks and lack meaningful information security, current RFID technology, if it is to be used on consumer-facing products, must be permanently disabled or "killed" at the point of sale. We also urge industry to make "kill" technology cheaply and readily available to consumers, so that individuals can be sure that RFIDs truly have been disabled.

Accordingly, EFF urges the Commission to reject Goal 16.1 of the Strategic Plan or, at the very least, to postpone adoption of RFIDs pending further study and research into its privacy implications and cost-effectiveness.

Respectfully submitted,

Lee Tien

Senior Staff Attorney

Electronic Frontier Foundation

Addendum

EFF has been informed that the Library is amending the language of the Strategic Plan to reflect that the Library has not yet decided to implement an RFID system. While this is good news, it does not answer the concerns and questions we have set forth above. EFF hopes that the Library intends to open the matter of RFID implementation to public discussion, and looks forward to participating in any such discussion.

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[1] EFF is a non-profit, civil liberties group based in San Francisco with more than 10,000 members. Our website is at <http://www.eff.org>.

[2] EFF does not express any opinion about other parts of the Strategic Plan.

[3] Jane Black, "Playing Tag with Shoppers' Anonymity," *Business Week Online* (July 21, 2003). http://www.businessweek.com/technology/content/jul2003/tc20030721_8408_tc073.htm

[4] Beth Givens, Privacy Rights Clearinghouse, *RFID and the Public Policy Void* (Aug. 18, 2003) (presented to Joint Committee on Preparing California for the 21st Century, California Legislature, Sen. Debra Bowen, Chair), available at http://www.privacyrights.org/ar/RFIDHearing.htm (see enclosure).

[5] Auto-ID Centre, *Executive Briefing, Public Policy: Understanding Public Opinion* 6 (Feb. 1, 2003), <http://cryptome.org/rfid/cam-autoid-eb002.pdf>.

[6] James Covert and Christina Cheddar Bork, "Tracking Chips Stir Privacy Concerns," *Wall Street Journal* pg. 1 (Jul. 29, 2003, eastern edition).

[7] http://www.ala.org/Content/NavigationMenu/PLA/Publications_and_Reports/Tech_Notes/RFID_Techn

Electronic Frontier Foundation

Position Statement on the Use of RFID on Consumer Products

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Position Statement
on the Use of RFID on Consumer Products

November 14, 2003
Available at www.spychips.com and www.privacyrights.org

Issued by:

Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN)

Privacy Rights Clearinghouse

American Civil Liberties Union (ACLU)
Electronic Frontier Foundation (EFF)
Electronic Privacy Information Center (EPIC)
Junkbusters
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INTRODUCTION

Radio Frequency Identification (RFID) is an item-tagging technology with profound societal implications. Used improperly, RFID has the potential to jeopardize consumer privacy, reduce or eliminate purchasing anonymity, and threaten civil liberties.

As organizations and individuals committed to the protection of privacy and civil liberties, we have come together to issue this statement on the deployment of RFID in the consumer environment. In the following pages, we describe the technology and its uses, define the risks, and discuss potential public policy approaches to mitigate the problems we raise.

RFID tags are tiny computer chips connected to miniature antennae that can be affixed to physical objects. In the most commonly touted applications of RFID, the microchip contains an Electronic Product Code (EPC) with sufficient capacity to provide unique identifiers for all items produced worldwide. When an RFID reader emits a radio signal, tags in the vicinity respond by transmitting their stored data to the reader. With passive (battery-less) RFID tags, read-range can vary from less than an inch to 20-30 feet, while active (self-powered) tags can have a much longer read range. Typically, the data is sent to a distributed computing system involved in, perhaps, supply chain management or inventory control.

THREATS TO PRIVACY AND CIVIL LIBERTIES

While there are beneficial uses of RFID, some attributes of the technology could be deployed in ways that threaten privacy and civil liberties:

- **Hidden placement of tags.** RFID tags can be embedded into/onto objects and documents without the knowledge of the individual who obtains those items. As radio waves travel easily and silently through fabric, plastic, and other materials, it is possible to read RFID tags sewn into clothing or affixed to objects contained in purses, shopping bags, suitcases, and more.
- **Unique identifiers for all objects worldwide.** The Electronic Product Code potentially enables every object on earth to have its own unique ID. The use of unique ID numbers could lead to the creation of a global item registration system in which every physical object is identified and linked to its purchaser or owner at the point of sale or transfer.
- **Massive data aggregation.** RFID deployment requires the creation of massive databases containing unique tag data. These records could be linked with personal identifying data, especially as computer memory and processing capacities expand.
- **Hidden readers.** Tags can be read from a distance, not restricted to line of sight, by readers that can be incorporated invisibly into nearly any environment where human beings or items congregate. RFID readers have already been experimentally embedded into floor tiles, woven into carpeting and floor mats, hidden in doorways, and seamlessly incorporated into retail shelving and counters, making it virtually impossible for a consumer to know when or if he or she was being "scanned."
- **Individual tracking and profiling.** If personal identity were linked with unique RFID tag numbers, individuals could be profiled and tracked without their knowledge or consent. For example, a tag embedded in a shoe could serve as a de facto identifier for the person wearing it. Even if item-level information remains generic, identifying items people wear or carry could associate them with, for example, particular events like political rallies.

FRAMEWORK OF RFID RIGHTS AND RESPONSIBILITIES

This framework respects businesses' interest in tracking products in the supply chain, but emphasizes individuals' rights to not be tracked within stores and after products are purchased. To mitigate the potential harmful consequences of RFID to individuals and to society, we recommend a three-part framework. First, RFID must undergo a formal technology assessment, and RFID tags should not be affixed to individual consumer products until such assessment takes place. Second, RFID implementation must be guided by Principles of Fair Information Practice. Third, certain uses of RFID should be flatly prohibited.

Technology assessment. RFID must be subject to a formal technology assessment process, sponsored by a neutral entity, perhaps similar to the model established by the now defunct Congressional Office of Technology Assessment. The process must be multi-disciplinary, involving all stakeholders, including consumers.

Principles of Fair Information Practice. RFID technology and its implementation must be guided by strong principles of fair information practices (FIPs). The eight-part Privacy Guidelines of the Organisation for Economic Co-operation and Development (OECD) provides a useful model (www.oecd.org). We agree that the following minimum guidelines, based in part on these principles, must be adhered to while the larger assessment of RFID's societal implications takes place:

- **Openness, or transparency.** RFID users must make public their policies and practices involving the use and maintenance of RFID systems, and there should be no secret databases. Individuals have a right to know when products or items in the retail environment contain RFID tags or readers. They also have the right to know the technical specifications of those devices. Labeling must be clearly displayed and easily understood. Any tag reading that occurs in the retail environment must be transparent to all parties. There should be no tag-reading in secret.
- **Purpose specification.** RFID users must give notice of the purposes for which tags and readers are used.
- **Collection limitation.** The collection of information should be limited to that which is necessary for the purpose at hand.
- **Accountability.** RFID users are responsible for implementation of this technology and the associated data. RFID users should be legally responsible for complying with the principles. An accountability mechanism must be established. There must be entities in both industry and government to whom individuals can complain when these provisions have been violated
- **Security Safeguards.** There must be security and integrity in transmission, databases, and system access. These should be verified by outside, third-party, publicly disclosed assessment.

RFID Practices that Should be Flatly Prohibited:

- Merchants must be prohibited from forcing or coercing customers into accepting live or dormant RFID tags in the products they buy.
- There should be no prohibition on individuals to detect RFID tags and readers and disable tags on items in their possession.
- RFID must not be used to track individuals absent informed and written consent of the data subject. Human tracking is inappropriate, either directly or indirectly, through clothing, consumer goods, or other items.
- RFID should never be employed in a fashion to eliminate or reduce anonymity. For instance, RFID should not be incorporated into currency.

ACCEPTABLE USES OF RFID

We have identified several examples of "acceptable" uses of RFID in which consumer-citizens are not subjected to "live" RFID tags and their attendant risks.

- **Tracking of pharmaceuticals** from the point of manufacture to the point of dispensing. RFID tags could help insure that these critical goods are not counterfeit, that they are handled properly, and that they are dispensed appropriately. RFID tags contained on or in the pharmaceutical containers should be physically removed or permanently disabled before being sold to consumers.
- **Tracking of manufactured goods** from the point of manufacture to the location where they will be shelved for sale. RFID tags could help insure that products are not lost or stolen as they move through the supply chain. The tags could also assure the goods are handled appropriately. Tags should be confined to the outside of product packaging (not embedded in the packaging) and be permanently destroyed before consumers interact with them in the store.
- **Detection of items containing toxic substances** when they are delivered to the landfill. For example, when a personal computer is brought to the landfill, a short-range RFID tag could

communicate toxic content to a reader at the landfill. It is important to underscore that uses such as the landfill example do not require -- and should not entail -- item-level unique identifiers. The RFID tag would, rather, emit a generic recycling or waste disposal message.

CONCLUSIONS

We are requesting manufacturers and retailers to agree to a voluntary moratorium on the item-level RFID tagging of consumer items until a formal technology assessment process involving all stakeholders, including consumers, can take place. Further, the development of this technology must be guided by a strong set of Principles of Fair Information Practice, ensuring that meaningful consumer control is built into the implementation of RFID. Finally, some uses of RFID technology are inappropriate in a free society, and should be flatly prohibited. Society should not wait for a crisis involving RFID before exerting oversight.

Although not examined in this position paper, we must also grapple with the civil liberties implications of governmental adoption of RFID. The Department of Defense has issued an RFID mandate to its suppliers, schools and libraries in the have begun implementing RFID, the EU and the Japanese government have considered the use of RFID in currency, and British law enforcement has expressed an interest in using RFID as an investigative tool. As an open democratic society, we must adopt a strong policy framework based on Principles of Fair Information Practice to guide governmental implementation of RFID.

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Attachment 1

November 14, 2003

Limitations of RFID Technology : Myths Debunked

The following technological limitations have been proposed as reasons why consumers should not be concerned about RFID deployment at this time. We address each perceived limitation in turn, and explain why in themselves, these limitations cannot be relied upon as adequate consumer protection from the risks outlined above.

1. Read-range distances are not sufficient to allow for consumer surveillance.

RFID tags have varying read ranges depending on their antenna size, transmission frequency, and whether they are passive or active. Some passive RFID tags have read ranges of less than one inch. Other RFID tags can be read at distances of 20 feet or more. Active RFID tags theoretically have very long ranges. Currently, most RFID tags envisioned for consumer products are passive with read ranges of under 5 feet.

Contrary to some assertions, tags with shorter read ranges are not necessarily less effective for tracking human beings or items associated with them. In fact, in some cases a shorter read range can be more powerful. For example, if there were an interest in tracking individuals through their shoes as they come within range of a floor reader, a two-inch read range would be preferable to a two-foot read range. Such a short range would help minimize interference with other tags in the vicinity, and help assure the capture of only the pertinent tag positioned directly on the reader.

2. Reader devices not prevalent enough to enable seamless human tracking.

The developers of RFID technology envision a world where RFID readers form a "pervasive global network" It does not take a ubiquitous reader network to track objects or the people associated with them. For example, automobiles traveling up and down Interstate 95 can be tracked without placing RFID readers every few feet. They need only be positioned at the entrance and exit ramps. Similarly, to track an individual's whereabouts in a given town, it is not necessary to position a reader device every ten feet in that town, as long as readers are present at strategic locations such as building entrances.

3. Limited information contained on tags.

Some RFID proponents defend the technology by pointing out that the tags associated with most consumer products will contain only a serial number. However, the number can actually be used as a reference number that corresponds to information contained on one or more Internet-connected databases. This means that the data associated with that number is theoretically unlimited, and can be augmented as new information is collected.

For example, when a consumer purchases a product with an EPC-compliant RFID tag, information about the consumer who purchased it could be added to the database automatically. Additional information could be logged in the file as the consumer goes about her business: "Entered the Atlanta courthouse at 12:32 PM," "At Mobil Gas Station at 2:14 PM," etc. Such data could be accessed by anyone with access to such a database, whether authorized or not.

4. Passive tags cannot be tracked by satellite.

The passive RFID tags envisioned for most consumer products do not have their own power, meaning they must be activated and queried by nearby reader devices. Thus, by themselves, passive tags do not have the ability to communicate via satellites.

However, the information contained on passive RFID tags could be picked up by ambient reader devices which in turn transmit their presence and location to satellites. Such technology has already been used to track the real-time location of products being shipped on moving vehicles through the North American supply chain.

In addition, active RFID tags with their own power source can be enabled with direct satellite transmitting capability. At the present time such tags are far too expensive to be used on most consumer products, but this use is not inconceivable as technology advances and prices fall.

5. High cost of tags make them prohibitive for wide-scale deployment.

RFID developers point to the "high cost" of RFID tags as a way to assuage consumer fears about the power of such tags. However, as technology improves and prices fall, we predict that more and more consumer products will carry tags and that those tags will become smaller and more sophisticated. We predict that the trend will follow the trends of other technical products like computers and calculators.

RFID Position Paper

Attachment 2

A Critique of Proposed Industry Solutions

The RFID industry has suggested a variety of solutions to address the dangers posed by RFID tagging of consumer products. Among them are killing the tags at point of sale, the use of "blocker tags," and the "closed system." We examine each strategy in turn.

KILLING TAGS AT POINT OF SALE

Some have proposed that the RFID tag problem could be solved by killing the tags at the point of sale, rendering them inoperable. There are several reasons why we do not believe this approach alone and without other protections will adequately protect consumer privacy:

Killing tags after purchase does not address in-store tracking of consumers.

To date, nearly all consumer privacy invasion associated with RFID tagging of consumer products has occurred within the retail environment, long before consumers reached the checkout counter where chips could be killed. Examples include:

- Close-up photographs were taken of consumers as they picked up RFID-tagged packages of Gillette razor products from store shelves equipped with Auto-ID Center "smart shelf" technology.[1]
- A video camera trained on a Wal-Mart cosmetics shelf in Oklahoma enabled distant Procter and Gamble executives to observe unknowing customers as they interacted with RFID-tagged lipsticks.[2]
- Plans are underway to tag books and magazines with RFID devices to allow detailed in-store observation of people browsing reading materials[3]. This potential was demonstrated recently at the Tokyo International Book Fair 2003. According to Japan's *Nikkei Electronic News*, "By placing tag readers on the shelves of bookstores, the new system allows booksellers to gain information such as the range of books a shopper has browsed, how many times a particular title was picked up and even the length of time spent flipping through each book."

We recognize the need for stores to control shoplifting and make general assessments to enhance operations. However, monitoring and recording the detailed behaviors of consumers without their consent, even if only within the store, violates Principles of Fair Information Practice.

Tags can appear to be "killed" when they are really "asleep" and can be reactivated

Some RFID tags have a "dormant" or "sleep" state that could be set, making it appear to the average consumer that the tag had been killed. It would be possible for retailers and others to claim to have killed a tag when in reality they had simply rendered it dormant. It would be possible to later reactivate and read such a "dormant" tag.

The tag killing option could be easily halted by government directive.

It would take very little for a security threat or a change in governmental policies to remove the kill-tag option. If RFID tags are allowed to become ubiquitous in consumer products, removing the kill option could enable the instant creation of a surveillance society.

Retailers might offer incentives or disincentives to consumers to encourage them to leave tags active.

Consumers wishing to kill tags could be required to perform additional steps or undergo burdensome procedures, such as waiting in line for a "killer kiosk"[4] and then being required to kill the tags themselves. Consumers who choose to kill the tags might not enjoy the same discounts or benefits as other consumers, or might not be allowed the same return policies. In many areas of privacy law, this retailer incentive is recognized, and there are legislative prohibitions against inducing the consumer to waive their privacy rights.[5]

The creation of two classes of consumers.

If killing tags requires conscious effort on the part of consumers, many will fail to do so out of fear, ignorance, or lack of time. Many will choose *not* to kill the tags if doing so is inconvenient. (The current "killer kiosk" requires loading one item at a time, a lengthy and time consuming process.) This would create two classes of consumers: those who "care enough" to kill the RFID tags in their products and those who don't. Being a member of either class could have negative ramifications.

BLOCKER TAGS

RFID blocker tags are electronic devices that should theoretically disrupt the transmission of all or select information contained on RFID tags. The proposed blocker tag might be embedded in a shopping bag, purse, or watch that is carried or worn near tags with information consumers want blocked.[6]

According to our understanding, the blocker tag does not yet exist. Until a blocker tag is built and tested, there is no way to know how effective it will be and whether it can be technically defeated.

The blocker tag might encourage the proliferation of RFID devices by giving consumers a false sense of security. While the proposed invention is an ingenious idea, it's one that could be banned or be underutilized if consumers become complacent. It's also possible that such an electronic device could be technically defeated either purposefully or because it stops functioning naturally.

The blocker tag could be banned by government directive or store policy.

Consumers could lose the right to use blocker tag devices if the government deems that knowing what people are wearing or carrying is necessary for national security. They might disallow the devices altogether or name selective spaces in which blocker tags would be disallowed. It is not inconceivable to imagine a ban on such devices in airports or public buildings, for example.

Retail stores might ban blocker tags if they believe the tags might be used to circumvent security measures or if they believe knowing details about consumers is valuable in their marketing efforts.

Once RFID tags and readers are ubiquitous in the environment, a full or partial ban on a privacy device like the blocker tag would leave consumers exposed and vulnerable to privacy invasion.

A blocker tag shifts the burden of protecting privacy away from the manufacturers and retailers and places it on the shoulders of consumers. In addition, busy consumers might forget to carry blocker devices or forget to implement them, especially if additional steps are required to make them effective.

Fails to protect consumers once products are separated from the blocker tag.

Blocker tags theoretically work only when they are close to the items they are designed to "conceal" from RFID reader devices. Once items are out of the range of the blocking device, consumers would be exposed and vulnerable to privacy invasion. For example, a consumer might buy a sweater and feel that the information on the embedded RFID tag is unexposed because she is carrying it home in a bag impregnated with a blocker device. However, once she removes that sweater from the bag and wears it in range of a reader device, information from that tag could be gleaned.

The creation of two classes of consumers.

Like the kill tag feature, blocker tags will also likely create two classes of consumers, those who block tags and those who do not.

CLOSED SYSTEM

Industry proponents argue that when RFID applications are confined to closed systems, the data is only accessible to those within the system and those with a government mandate (perhaps via legislation such as the Communications Access to Law Enforcement Act (CALEA)). Therefore they argue, society-wide profiling and tracking are not likely. An example of a current closed application is RFID in libraries. *The Grapes of Wrath* in Library X has a different code than the same book in Library Y.

Whereas today RFID applications are confined to closed systems, there will be great incentives to standardize product level tagging. Publishers, for example, may someday ship books to libraries and bookstores with writable tags. Each copy of *The Grapes of Wrath* will contain a portion of its EPC code that is the same as every other copy. The library will be able to customize the remainder of the code to suit its own inventory control purposes.

Even if closed systems remain closed, their lack of transparency makes them troubling from a privacy perspective. Because details about closed systems might not be readily available, consumers could have difficulty obtaining the information necessary to assess privacy risks and protect themselves.

We appreciate that industry proponents are making an effort to address consumer privacy and civil liberties concerns associated with RFID technology. However, while we believe the proposed solutions are offered in the proper spirit, they provide inadequate protection. Until appropriate solutions are developed and agreed upon, we believe it is improper to subject consumers to the dangers of RFID technology through item-level consumer product tagging.

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[1] Alorie Gilbert, "Cutting edge 'smart shelf' test ends." CNET News, August 22, 2003. Available online at http://news.com.com/2100-1008_3-5067253.html

[2] Howard Wolinsky, "P&G, Wal-Mart store did secret test of RFID." The Chicago Sun Times, November 10, 2003. Available online at http://www.suntimes.com/output/lifestyles/cst-nws-spy09.html

[3] Winston Chai, "Tags track Japanese shoppers." CNET News, May 8, 2003. Available online at http://news.zdnet.co.uk/business/0,39020645,2134438,00.htm

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[6] RFID blocker tags developed." Silicon.com, August 28, 2003. Available online at http://www.silicon.com/software/applications/0,39024653,10005771,00.htm

RFID Implementation in Libraries:
Presentations to ALA Intellectual Freedom Committee
American Library Association

January 10, 2004, at ALA Mid-Winter, San Diego, CA

- **Beth Givens**, Director, Privacy Rights Clearinghouse
- **Lee Tien**, Senior Staff Attorney, Electronic Frontier Foundation

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RFID Implementation in Libraries:
Some Recommendations for "Best Practices"

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General Issues:

- The selection of a system to automate library functions such as a circulation or an integrated library system (ILS) launches the library into a *long-term commitment* to that system. If a library selects an RFID-based system, it is likely to retain that system for a long time, primarily because of its high cost as well as the time-consuming structural changes that the library must engage in to successfully use the new system.

- Has the library community examined where the RFID technology is going and how it is expected to evolve? Even though privacy and civil liberties impacts might not be of concern now because RFID systems in libraries are essentially "closed" systems, that may not be the situation forever. For example, the publishing industry is exploring the use of RFID to tag books.

- The library community must monitor and shape the direction vendors and jobbers are taking with RFID. It is important for the library community to resist efforts that move RFID from its present proprietary ("closed") status to that of the RFID standards in the marketplace (the EPC standard developed by MIT's AutoID Center) – or that incorporate the use of marketplace tags with library-specific tags, a situation that could occur if the publishing industry adopts RFID. Also, it is especially critical for the library community to require effective, auditable security of RFID systems.

- We recommend that the library community conduct a comprehensive technology assessment of RFID as soon as possible to enable librarians to make the best possible decisions involving the implementation of this technology. Such a risk-benefit analysis would include an investigation of the potential privacy and civil liberties implications and the best methods to mitigate these harms.

- The library community is a leader in protecting intellectual freedom and user privacy. Libraries have an opportunity to be societal leaders and a "model industry" in the way in which they adopt RFID-based circulation and ILS systems.

Best Practices, based primarily on Principles of Fair Information Practices (resources at end):

- **Privacy policy**. If the library has not adopted a privacy policy, it should develop one that encompasses its implementation of RFID.
- **Notice / Openness**. The library must make public its policies and practices involving the use and maintenance of RFID systems, encompassing tags, readers, and the associated database(s).
  - Library users have a right to know that items contain RFID tags and generally where readers are located.
  - They have the right to know the technical specifications of those devices.
  - Labeling must be clearly displayed and easily understood.
  - Any tag reading that occurs in the library environment must be transparent to all parties. There should be no tag-reading in secret.
- **Purpose specification.** Library users must be given notice of the purposes for which tags and readers are used.
- **Collection limitation.** The collection of information should be limited to that which is necessary for the stated purpose. There should be no personal data encoded in RFID tags.
- **Security safeguards.** There must be auditable security and integrity in transmission, databases, and system access, including the use of encryption.
- **Accountability**. The library must inform its users who they can contact for questions and complaints.

Resources

AutoID Center, "Guiding Principles [for RFID]" posted on the Alien Technology web site, www.alientechnology.com/product/rfid_privacy.html (2003).

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Vinod Chachra and Daniel McPherson, "Personal Privacy and Use of RFID Technology in Libraries," www.vtls.com/documents/privacy.pdf. (Oct. 2003).

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Beth Givens, "A Review of the Fair Information Principles," Privacy Rights Clearinghouse, www.privacyrights.org/ar/fairinfo.htm (1997).

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"Should Libraries Play Tag with RFIDs? Librarians Jackie Griffin and Karen Schneider discuss the benefits and problems of using this hot new technology," *American Libraries* (Dec. 2003).

Lee Tien, "Privacy Risks of Radio Frequency Identification 'Tagging' of Library Books," testimony first presented to San Francisco Public Library Oct. 1, 2003, and contributed to Committee on Energy and Utilities, California Senate, Nov. 20, 2003, www.senate.ca.gov/ftp/SEN/COMMITTEE/STANDING/ENERGY/_home/11-20-03library.htm.

RFID and Libraries:
EFF Talking Points for ALA IFC

Lee Tien, Senior Staff Attorney
Electronic Frontier Foundation
tien@eff.org, www.eff.org

January 10, 2004

1. While "closed" or "proprietary" library RFID systems may provide some privacy protection for library patrons today, this is not a viable long-term answer to the civil liberties risks. Closed systems rely fundamentally on "security through obscurity."

2. Several forces seem poised to erode closed systems.

    a. Book publishers will eventually use their own RFIDs. It likely won't happen for a few years, but the Book Industry Study Group is looking at RFIDs. See AAP Memo ("RFID may eventually become widely used for identification of products in the book industry"); Japanese Book Tracking Trial: <http://news.zdnet.co.uk/business/0,39020645,2134438,00.htm> ("...allows booksellers to gain information such as the range of books a shopper has browsed, how many times a particular title was picked up and even the length of time spent flipping through each book"). To the extent that major retailers like Wal-Mart sell books and want suppliers to use RFIDs, the trend will gain momentum. An individual library would have a strong cost incentive to use whatever RFID system used by book publishers.

    b. Many libraries already are parts of larger library systems or library consortia, and it should be expected that RFIDs will be interoperable within their own systems or consortia.

    c. Today's library RFIDs mainly operate in the high-frequency (HF) 13.56 MHz band, the most widely used of the RFID HF bands (UHF/868-915 MHz and microwave/2.45 GHz or 5.8 Ghz) because it's the global standard frequency for contactless smart cards or proximity cards. HF-band RFIDs have longer read ranges than low-frequency RFIDs, but don't need a power source. As a result, we should expect RFID readers/sensors for this frequency band to be very common, which will increase the likelihood that non-library RFID readers will be able to capture RFID data from library RFID tags.

    d. Exploiting mass-production scale economies is a key major business goal of the RFID industry. It's unclear how long libraries will have market pull with RFID system vendors, because the industry needs to standardize and consolidate on a discrete set of options in order to sell as many RFID tags as possible for as many applications as possible globally. It's likely that the RFID industry and manufacturers, resellers, system integrators and government agencies will cooperate even more as the industry matures.

3. Libraries are one of the few government entities now using RFIDs, along with schools and the Defense Department. Unlike commercial RFIDs, government RFIDs (like library RFIDs) will be developed with persistence in mind: ID cards are an obvious example. Because the "kill" option won't be available – we expect it will be unlawful to tamper with the RFID on a driver's license or passport -- the privacy/civil liberties issues are more serious. EFF urges libraries to think of themselves as part of the government and to think about the need for a deliberate policy process for government use of RFIDs, at least at the state and local level.

4. If libraries wish to influence RFID use and development toward privacy and security, the time is now. EFF urges libraries to act collectively as soon as possible to protect their own and their patrons' interests, as well as to set an example for society.

Privacy Rights Clearinghouse

New Postings & Alerts	Fact Sheets	Páginas Informativas	Speeches & Testimony
Identity Theft	Financial Privacy	Internet Privacy	Medical Records	Background Checks & Workplace
Telephone & Telecommunications	Public & Government Records	Consumers Speak Out	Privacy Links	About Us
Contact Us	Join our Mailing List	Support Us	Send Your Inquiry	Privacy Policy	Search Our Site	Home

RFID and Libraries: Both Sides of the Chip

Karen G. Schneider
Director, Librarians' Index to the Internet, http://lii.org
Chair, California Library Association Intellectual Freedom Committee

I. RFID in Libraries: Necessary, Sensible, and Humane

RFID is an inevitable technology in libraries, both for financial and humane reasons. In this country, library usage has risen significantly in the past decade (and since March 2001 has soared, perhaps in response to the economy[1]), library collections have grown significantly, labor costs of staffing circulation desks have soared, and a highly feminized workforce spends all day in repetitive tasks required by older technologies such as paper barcodes.

Libraries have several activities that can benefit from RFID. These include:

- Circulation: checking out books and other items, and checking them back in again
- Inventory management: ensuring items are properly located in the collection
- Book processing: adding items to the library's collection

By making books and other library items "smart," RFID offers the following improvements to library services:

1. **Reduction in workplace injuries**. Workplace injuries caused by the repetitive motions related to flipping books and angling books under barcode readers cost libraries millions of dollars every year, and lead to pain, limited physical range, and other problems familiar to a feminized workforce.

2. **Facilitating self-check**. Self-check, or checking out your own books, is much easier with RFID technology because the book does not have to be positioned or angled under a barcode scanner, but can be simply moved within range of an RFID reader. Self-check saves money directly, by reducing labor costs for circulation (check-out) activities, and indirectly, by reducing opportunities for repetitive stress injuries. Furthermore, self-check is inherently more private than requiring another human to handle and inspect the items you wish to check out of the library.

3. **Streamlined inventory management**. Libraries spend a lot of money ensuring books are where they need to be. Books with barcodes require humans to physically remove and handle every item to ensure it is in the correct location. RFID offers the ability to analyze and correct library inventories without handling the items.

4. **Streamlined in-processing**. Acquisitions—the library activity associated with purchasing books and adding them to the collection—can be streamlined with RFID.

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[1] See Library usage up in wake of recession, American Library Association, April 2002, http://www.ala.org/Content/ContentGroups/Press_Releases2/Library_usage_up_in_wake_of_recession_.htm

All four of these benefits lead to improved public service, which is the bottom line of librarianship. Libraries rarely enjoy luxurious budgets, and it is the goal of every administrator to redirect as many funds as possible toward better library services—more books, more story hours, and longer hours of service for everyone.

II. RFID in Libraries: Cause for Concern

Despite the clear advantages of RFID in libraries, as a library administrator and a former supervisor of a library's circulation department, I must raise a cautionary note.

The fiscal and humane arguments for moving away from barcode technology in libraries cannot obscure the fact that libraries began adopting RFID several years ago without serious preliminary enquiries into the technology, either *in situ* or as part of a larger universe in which libraries are but one of many public and private institutions adopting new technologies.

To many free-speech and privacy advocates, reassurances that profession-wide, RFID in libraries is being implemented in a privacy-safe manner ring somewhat hollow. This skepticism is not without basis. Too often librarians' rationalizations are facile or vendor-supplied, or simply illogical, and in some cases raise more concerns than they resolve, particularly since the library profession, as a whole, has yet to seriously discuss RFID.

These rationalizations can be summarized as follows:

1. RFID tags are expensive; therefore, RFID will not become pervasive in society.
2. RFID tags for library items would be disabled after check-out.
3. Libraries only store barcodes on their tags.
4. Library databases are highly secure.
5. As implemented for libraries, RFID has limited range.
6. It's too hard to use this information anyway.
7. Library RFID operates on a different frequency (or, library RFID is unique, and does not follow the "industry standard").
8. Librarians are aware of the privacy issues related to RFID and consider these issues when implementing RFID.
9. Libraries are a unique, isolated institution in society. Whatever anyone else does with RFID has nothing to do with us.
10. Libraries can never be forced to adopt a specific RFID standard or implement RFID in a specific manner.

Tellingly, you will never find librarians arguing that other institutions have no vested interest in learning about the reading habits of library users. Librarians have spent over fifty years developing the theory and practices described in our Library Bill of Rights[2] and outlined at length in the Intellectual Freedom Manual of the American Library Association[3], precisely because far too many government and private institutions have expressed far too much interest in the reading habits of library users, as is evident from the FBI's Library Awareness Program of the 1970s and today's USA PATRIOT Act.

Point by point, here are some concerns, and possible responses, to the nine rationalizations listed above:

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[2] See American Library Association, Office of Intellectual Freedom, http://www.ala.org/alaorg/oif/

[3] ibid.

1. **The cost of the chip is a red herring.** Obviously, as use increases, the cost will decrease, and vice versa. Vendors and librarians are both counting on that. Library tags will most likely always be more expensive than retail tags, as tags for library materials are expected to be reused and to last the life of the item. However, relying on the cost of RFID in general as a natural limitation on implementation of this technology society-wide is illogical and already disproved by the many recent stories detailing rapid and widespread adoption of RFID in the retail and government worlds.

2. **Tags for library books must stay enabled, or "live," to be useful.** Any librarian actually working with this technology will volunteer this information immediately. Books need to be able to be live-tagged so libraries know whether a book has been checked out in the first place.

3. **Libraries *should* only store barcode numbers on these tags, but we have yet to develop best practices profession-wide.** At least one library in California has acknowledged that they store patron information on RFID tags, and who knows but a national privacy audit might reveal others. Note that to support our commitment to our users, libraries have developed databases that do not store information about our users' reading habits; this is standard professional practice encouraged by policy and procedures established by our national library associations. It is only a small stretch to ask the library profession to commit to policy and procedures that limit the amount of information stored on RFID tags to the least and most harmless content (the library's own unique barcode number for the item).

4. **Library databases are often maintained by library staff who "grew into" the job and may not have the training or expertise commonly associated with highly secure systems.** It is dangerous to assume that library systems are so powerfully secured that they would be impervious to an organization seeking to probe databases in order to connect library barcodes with library records. Many library databases are quite secure. But it is a fact that library salaries are rarely competitive enough to attract the best technicians, and in many cases library system staff are librarians pressed into duty for computer systems work who do not have a strong grounding in computer security. At any rate, privacy safeguards to be built into the chip and its implementation, not generated from shortsighted assumptions about privacy "dams" such as secure databases or limited technology.

5. **All popular computing technology becomes smaller, cheaper, and more powerful over time, and often within very narrow timeframes.** (The response sometimes heard, that RFID is not a computational technology, is both incorrect and a red herring, as the devices for reading tags are as important as the tags themselves.) Stephen Satchell, a technology journalist, recently wrote, "Regarding bandwidth and antenna power, the cellular approach to radio communications has blown the top off the count of number of separate transmissions that can occur. Look at what has happened with the cell phone, 802.11b wireless, BlueTooth, and other low-power many-receiver systems."

6. **RFID cheaply and efficiently automates surveillance.** That's why it has become popular so quickly; look at CASPIAN's campaign against Benneton for trying to enable live RFID in undergarment purchases. It has been a WOM (Word of Mouth) among librarians that it would be "easier" to follow someone around to see what they were reading, but this is absurd. The promise of RFID is equal to its danger: it vastly reduces the labor overhead required to track items.

7. **Reliance on features unique to library RFID is dangerous.** This is the "privacy dam" rationalization, where the assumption is that devices outside of the control of the library will continue to function as currently designed, that legislation and standard practices will provide natural protections, and that entities outside of librarianship will not be able to acquire equipment capable of reading library RFID tags. A truly privacy-friendly approach to RFID in libraries is to assume that all library RFID tags are world-readable, and work backwards from there.

8. **Librarians nationwide have acknowledged that privacy concerns related to RFID are new territory.** No profession cares more about its users' privacy than librarianship. However, we are only beginning to connect the dots with respect to RFID. We as a profession need to develop best practices for RFID and advertise these practices widely. We can either manage this issue or let it bite us in the fanny as watchdog organizations and the general public ask, correctly, why, and how, we are implementing this technology in libraries.

9. **Libraries are part of the general world commons, and none of our actions take place in a vacuum.** There is an inexorable march toward RFID in libraries, for highly compelling reasons outlined in the first section of this testimony. However, we cannot assume that our tags cannot be read by (or have no interest to) other organizations, or that we are not contributing to the accumulated It has been observed that libraries adopting RFID en masse send an overarching message that we understand and approve of this technology.

10. **Libraries have proved vulnerable to national agendas.** Recent legislation (CIPA and the Patriot Act) demonstrates that libraries have become highly porous battlegrounds for some of the larger privacy and public-forum debates in our society. With CIPA, many library budgets became dependent on the telecommunications discounts made available through E-Rate, essentially forcing some libraries to adopt draconian policies and procedures that limit Constitutionally-protected speech to adult users. With the Patriot Act, we have seen the government become increasingly inventive and aggressive in its efforts to track the reading habits of library users.

Conclusion: RFID in Libraries: Neither Perfidious nor Perfect

Librarians have the best of intentions with respect to use of RFID in libraries, but these intentions must now be conditioned with much better knowledge and more rigorous action than we have demonstrated to date. Following in the tradition of guidance for other technologies—from the humble book to the most elaborate Web site—librarians should put special emphasis on protecting user privacy, disclosure (alerting patrons of the use of RFID), accountability (taking responsibility for the outcomes of RFID), and security.

The library profession must be encouraged to develop best practices on an accelerated timetable, to work with other organizations in developing guiding principles, and to promulgate its advice as widely as possible to model privacy-friendly RFID practices. It would be advisable to recommend a national grant activity directed toward auditing the current environment, establishing and promulgating best practices, and developing national policy on RFID and similar privacy-challenging technologies.

Association of American Publishers, Inc.

aap

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Facsimile 212 255-7007
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Memo

TO: AAP Enabling Technologies Committee (ETC)

FROM: Ed McCoyd, Director of Digital Policy

DATE: November 18, 2003

RE: **Information on the RFID (Radio Frequency Identification) System**

I. Overview and Benefits of RFID

Radio frequency identification, or RFID, refers to the use of radio signals to read and write data. A serial number identifying an item can be stored on a microchip with an antenna (together known as an RFID "tag") that transmits information about the identified item to a receiver called a "reader." RFID technology is currently used in applications such as the E-Z Pass toll collection system.

RFID may eventually become a widely used for identification of products in the book industry. While standard bar codes identify the manufacturer and the product generally (e.g., the bar code on one copy of a particular edition of a book is often the same as on all other copies of that edition), RFID tags could be used to identify individual units of items (such as a particular copy of a book), as well as pallets or boxes of books.

A major advantage of RFID technology is that it does not require the tag to be in the line of sight of the reader. In other words, unlike a bar code, the tag does not have to be positioned or waved in front of the reading device in order to be read. RFID signals can also travel through walls and containers. Furthermore, product-related data can be stored on RFID tags and exchanged between tags and readers. Finally, an RFID tag reader can scan many tags at once. These features of RFID create exciting possibilities for the book industry, such as:

- A warehouse worker could scan an outgoing box containing 15 different titles in it to make sure the contents are correct, without having to open the box.

- When a book is placed in the return chute at a library, the library's systems could be notified automatically that the title is back in stock. Shelving information for the title can be stored on the RFID tag, enabling a staff person to re-shelve the returned book immediately without having to look up the shelving information in the library's database.

- One could take stock of books in a warehouse, library, or store without having to individually scan each book.

- As a method of preventing shoplifting, point-of-sale technology could communicate to the RFID tag that the book has been purchased by a consumer. The bookstore staff would be notified if a scanner at the store exit reads a tag on a book that has not yet been purchased.

II. Privacy Concerns

Librarians and other privacy advocates have expressed concern that if an RFID tag is still readable after a book leaves a store or library, privacy abuses may be possible. Perhaps a law enforcement official would use RFID scanning to seek out individuals in possession of books on bomb-making. Others might use the technology to find out people's reading activities for other purposes. One solution in the retail context may be to de-activate a tag on a book once it is purchased (although this is not a workable option in the library setting). Publishers will need to pay close attention to privacy concerns and solutions as RFID applications are introduced over time.

III. Electronic Product Code

The Uniform Code Council is developing the Electronic Product Code (EPC) as a new numbering standard to be used with RFID. The EPC is a unique serial number for any item with an RFID tag, and has the following structure:

First part: EPC version number (such as "01"). Version numbers can vary to permit an abundant supply of EPCs.

Second part: A string identifying the "EPC Manager," usually the manufacturer of the item.

Third part: An "object class" identifier, referring to the type of product (such as a particular brand and type of milk in its given carton size).

Fourth part: A serial number, unique to the actual item being identified (such as an individual carton of milk for sale in a grocery store, with an expiration date of X).

Although information can be stored directly on RFID chips, a popular approach may be for chips to contain a relatively small amount of data, and for additional information associated with the item to be looked up in a database when the EPC is read from the tag.

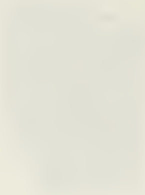
IV. Time Frame for RFID Adoption

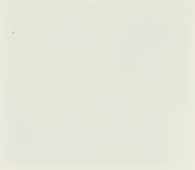
In order to implement RFID, retailers need to install readers and associated systems, and manufacturers have to change their production processes to attach tags to items. Conditions will also have to be in place where the expense of purchasing RFID tags is justified.

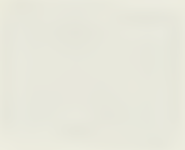
Industry experts predict that shipping items including cases and pallets will be the first objects assigned RFID tags on a large scale. Wal-Mart is pushing for all of its suppliers to place RFID tags on cases and pallets by 2006.

Kevin Ashton, Executive Director of the Massachusetts Institute of Technology's Auto-ID Center (a project that has developed and promoted RFID technology), reportedly predicts that RFID tagging of individual product items will become common in the U.S. between 2007 and 2010. There isn't a current consensus on when RFID will be widely adopted at the item level, however. AAP will continue to monitor and report RFID developments to our membership.

Mapping The Data







Mapping the Data

data stored
on the tag

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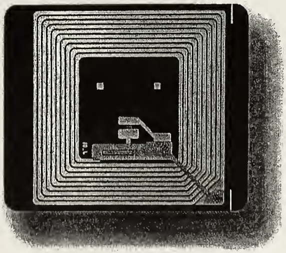
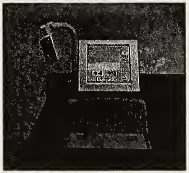
are needed to see this picture.



data stored on
readers, workstations, gates



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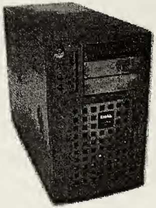
data stored
in library database



Images gathered from vendor
websites: 3M, CheckPoint, Dell,
LibraMation, Tech Logic, Vernon;

Samuelson Law, Technology
& Public Policy Clinic
2004 March

Technical Issues in Library RFID Privacy

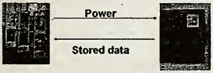
David Molnar
UC-Berkeley
Computer Science

What are we worried about?

- RFID new technology
  - Law of "unintended consequences"
- Read tags through backpacks, briefcases
- Can we track books?
  - "track" = link sightings of same book
- Can we figure out what you're reading?
- Who "we" is depends
  - FBI, marketers, teenagers, college students, pick your favorite

How RFID Works

- Radio Frequency IDentification
- Passive tags – no power source
- Tag carries small amount of data
  - May be read-only or limited read/write
- RFID reader powers tag, extracts data via radio



Two Main Questions

- How to read tags?
- What is on the tag?

How to read tags?

- Need an RFID reader
  - Standardization not privacy issue in long term
- Read range for 13.56Mhz tags low
- Ubiquity of readers bigger problem!
  - Reader at door of every Starbucks?
- Blocking tag signals, "kill", not sufficient
- "Security Bit" **does not prevent tag read**
- Read passwords?

What is on the tag?

- Varies by vendor and library decision
- Library bar code
  - Unique, static ID → can track book
  - Need library database to learn title/author
    - Unless see book later, learn bar code/title map
- Some vendors suggest more info

  "The Lib~Chip stores data such as type of material, title, author, bar code and serial number, shelf location, last borrowed date, and last returned date." – Libramation site

“Encrypting” Tag Data

- Several meanings to “encrypting” data
  - Proprietary encoding, not different per library
    - Buy reader from company or secondary market
    - Eventually reverse engineered
  - Encrypting bar code with per-library key
    - Does not currently exist
    - Non-library readers can't understand data
    - Still leads to static data → can track book

Bottom Line

- Reading static ID is privacy risk
  - Risk will grow as readers become cheaper, more available, more common
- Minimize data on tag
  - No title, no author, etc. on tag
  - Protect bibliographic database!
- Privacy depends on choices in deployment

BERKELEY PUBLIC LIBRARY BEST PRACTICES

- Library information on the tag should be limited to the barcode.
- Patrons should not have the ability to search the catalog by barcode.
- Do not utilize wireless connections to communicate between security gates, self-checks or other RFID-reading devices and the ILS database unless more security is incorporated in these communications. (Consider VPN for example.)
- The implementation of an RFID system only reinforces the current library's duty to make sure their ILS database is as secure from unauthorized entry as possible.
- Do not implement smart-card RFID patron library cards.
- Inform patrons that your library utilizes RFID technology.

INFLUENCING FUTURE DEVELOPMENTS IN RFID TECHNOLOGY

- Encourage vendors to develop a protocol for formatting and placement of data on the tag (standardization beyond ISO 18000-3) while concurrently developing security to ensure privacy (such as encryption). Work with those knowledgeable about emerging technology to provide input and oversight.
- Encourage vendors to use or develop systems where the reader queries the tag first, rather than having the tag broadcast first, or require authentication before data is transmitted.
- Encourage vendors to develop password technology to help ensure that a reader purchased by an unauthorized source is not able to read any tag.
- To protect the library's investment in the technology, chips should be write-able, so that upgrades can be incorporated. Concurrently, security measures should be developed so that there is protection against unauthorized or accidental writing to the tag.
- Monitor the book industry for developments in the preprocessing of books with RFID tags. Book companies could allow much more data on the tag, or could reference the ISBN number on the tag, leading to easier detection of the book title.

San Francisco Public Library

WHEREAS, the San Francisco Public Library Commission is pleased to express its GRATITUDE, as well as to RECOGNIZE, HONOR, and COMMEND the generous gift of his painting, "Authors of Latin American Roots," which renowned San Francisco artist ENRIQUE CHAGOYA has made to the beautification of San Francisco's Main Public Library; and

WHEREAS, the many artworks created by ENRIQUE CHAGOYA, a highly respected San Francisco artist, have significantly enriched the cultural life of our City and in this work contributed significantly to heightened awareness of the importance and value of the many significant works of Latino and Latin American authors, Pablo Neruda, Rubén Dario, Carlos Fuentes, Gabriel Garcia Márquez, Sandra Cisneros, Alejo Carpentier, Juan D. Bruce Novoa, Lydia Carrillo, Julio Cortázar, Sor Juana Inés de la Cruz, Claribel Alegria, Elena Poniatowska, Alvaro Mutis, Roberto Sosa, Mario Benedetti, Ana Castillo, José Marti, Gabriela Mistral, Rómulo Gallegos, Roque Dalton, Arturo Roa Bastos, Isabel Allende, César Vallejo, Jorge Amado, Mario Vargas Llosa, Jorge Icaza, Juan Rulfo, Jorge Luis Borges, Rosario Ferré, Ricardo Jaimes Freyre, Octavio Paz, Luisa Valenzuela, Gary Soto, Miguel Angel Asturias, Pedro Henríquez Ureña, and Jose Benjamín Quintero, whose names are inscribed on the canvas, to the cultural life of San Francisco, and indeed the entire world; and

WHEREAS, the San Francisco Public Library Commission will SALUTE ENRIQUE CHAGOYA, an outstanding exemplar of the high ideals of professional achievement, personal character, and community leadership at its regular meeting on March 4, 2004; Now,

THEREFORE, BE IT RESOLVED that the SAN FRANCISCO PUBLIC LIBRARY COMMISSION in RECOGNITION and HONOR of his generous gift of his mural painting, "Authors of Latin American Roots," to the Main Library, do hereby RECOGNIZE, HONOR, AND THANK

ENRIQUE CHAGOYA

In Witness Whereof, I have hereunto
set my hand and caused the seal of the
San Francisco Public Library Commission
to be affixed.

CHARLES A. HIGUERAS, A.I.A.
PRESIDENT
MARCH 4, 2004

San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

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Fran A. Streets
borah Strobin
mmissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Minutes of the special meeting of Thursday, March 4, 2004 (as approved April1, 2004)
The San Francisco Public Library Commission held a special meeting in place of its regular meeting on Thursday, March 4, 2004 in the Koret Auditorium, Main Library.

The meeting was called to order at 5:04pm.

The following members were present: Commissioners Chin, Coulter, Higueras, Steiman, and Strobin.

Commissioner Streets was excused attendance.
Commissioner Bautista joined the meeting at 5:10 pm.

AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public; the importance of the RFID Forum
Mr. David Grace; opposed RFID
Mr. Peter Warfield; concerns with RFID
Andy; more wireless technology availability in libraries

President Higueras announced that AGENDA ITEM #2 THE RFID FORUM would not be taken up until 6:00pm for the convenience of the public.

AGENDA ITEM #3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

Public comment on AGENDA ITEM #3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

An anonymous member of the public; the Minutes not fully or accurately reporting public comments
Mr. Peter Warfield; comments on online catalog problems not accurately reported

COMMISSION discussion of AGENDA ITEM # 3 APPROVAL OF THE MINUTES OF FEBRUARY 5, 2004

MOTION: by Commissioner Chin, 2nd Commissioner Bautista for approval of the Minutes of the regular meeting of February 5, 2004 with corrections if needed by the Commission Secretary after review of public comments.

Approved by the following vote:

ACTION: 6-0 AYE (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

AGENDA ITEM #4 CITY LIBRARIAN'S REPORT

The City Librarian reported on the following subjects: a report on the Public Library Association (PLA) meeting; exhibits and programs; and a report was presented by Deputy City Librarian Paul Underwood on the implementation of the Strategic Plan.

Public comment on AGENDA ITEM #4 CITY LIBRARIAN'S REPORT

An anonymous member of the public; strategic plan activities and RFID
Mr. Peter Warfield; recent exhibits and requests for reports
Mr. David Grace; concern about relationships with contractors

AGENDA ITEM #5 CHAGOYA MURAL RESOLUTION

Presentation and discussion of and possible action to approve a resolution in appreciation and thanks to Enrique Chagoya for his generous gift of his mural honoring Latino and Latin American writers to the Library.

Public comment on AGENDA ITEM #5 CHAGOYA MURAL RESOLUTION

An anonymous member of the public; history of the Chagoya Mural

Commission discussion of AGENDA ITEM ##5 CHAGOYA MURAL RESOLUTION

MOTION: Commissioner Coulter, 2nd Commissioner Bautista for approval of the proposed resolution honoring Artist Enrique Chagoya for his generous gift of his mural painting "Authors of Latin American Roots" to the Library.

Adopted by the following vote:
AYE 6-0 (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

The Friends of the Library reported: approval of a grant of $42, 500 to fund the Library's 125th Anniversary activities; on the 8th Annual Library Laureates Dinner on April 30; and about upcoming author lectures.

Public comment on AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

(None offered)

AGENDA ITEM #7 LABOR UNION REPORT

(No report offered)

A recess was called at 5:52pm
The Public Library Commission returned to session at 6:01pm

AGENDA ITEM #2 RFID FORUM (taken out of order as previously announced)

Presentation on and discussion of Radio Frequency Identification (RFID) Technology and the benefits of and concerns with replacing bar code technology with RFID Technology in the Library System.

(Presentations were made by panelists Kathy Lawhun, Chief of the Main Library, Ms. Gail McPartland, Assistant Director, Peninsula Library System, Ms. Ann Brick ACLU, Northern California Chapter, Mr. Lee Tien, Senior Staff Attorney, Electronic Frontier Foundation, Ms. Laura Quilter, Samuelson Law, Technology, and Public Policy Clinic, Boalt Hall School of Law, Mr. David Molnar, Electrical Engineering/Computer Sciences Department, UC Berkeley, and Ms. Jackie Griffin, Library Director, Berkeley Public Library followed by a question and answer session moderated by Deputy City Librarian Paul Underwood followed by public comment which was limited to 2 minutes per speaker for this item)

Public comment on AGENDA ITEM #2 RFID FORUM

Doug Loranger; SNAFU; public health concerns with electro-magnetic technologies
Anonymous member of the public; privacy concerns for library users
Peter Warfield; process used to consider RFID
Rachel MacLachlan; potential benefits of RFID
Diana Scott; related public health issues
Lori Guidos; repetitive stress injuries impacting library staff

Commission discussion of AGENDA ITEM #2 RFID FORUM

President Higueras noted that this was just the first step in a process to determine the suitability of RFID for the Library. The consensus of the Commission was that it would consider the following issues before deciding whether to approve the procurement of RFID technology for SFPL: consideration of long-term cost and benefits of RFID, including improved employee health; developing written rules encompassing the best practices for its use; consideration of what other libraries had done to implement RFID; and a review of questions about EMF (electro-magnetic frequency radiation) health related issues to address health concerns.

AGENDA ITEM #8 NEW BUSINESS

(No items were proposed)

AGENDA ITEM #9 ADJOURNMENT

Public comment on AGENDA ITEM #9 ADJOURNMENT

An anonymous member of the public; the late Daniel Boorstin

MOTION: by Commissioner Coulter, 2nd Commissioner Steiman that the meeting be adjourned In memoriam of the late Author sand former Librarian of Congress Daniel J. Boorstin.

Approved by the following vote:
6-0 AYE (Bautista, Chin, Coulter, Higueras, Steiman, and Strobin)

There being no further business, at the hour of 8:23pm the Public Library Commission adjourned.

Michael Housh, Commission Secretary 4/2/04

Please note: Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS to the March 4, 2004 Minutes:

How RFID Will work at SFPL.
Radio Frequency Identification: Choosing a model for Peninsula Library System.
An IEEC Spectrum article entitled: They Know Where you Are.
An Electronic Frontier Foundation memo to the Library Commission dated Oct. 1, 2003
RFID Implementation in Libraries: presentations to the ALA Intellectual Freedom Committee - recommendations for "Best Practices" .
RFID and Libraries: Both Side of the Chip.
Information on RFID (Radio Frequency Identification) System,
An aap memo dated Oct. 18, 2003.
Berkeley Public Library Best Practices.

The Chagoya Resolution

Minutes of the regular Commission Meeting of March 4, 2004

Appendix A

Library Commission meeting of March 4, 2004

The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16..

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.

The number of members of the public who spoke anonymously at this meeting. 1

San Francisco Public Library

100 Larkin Street, San Francisco, CA 94102

How RFID Will Work at SFPL

- RFID tags combine security and material identification functions. At check-out security activation of materials is automatic through interaction with the library's circulation software without staff intervention. Currently, staff must 'turn off' the security strip. With RFID the security process of turning tags off or on is automatic when an item is checked-in or out.

- We will use an RFID tag with the minimum amount of information on it – only a unique ID number or encryption for an item (no title or author information) and on/off for security.

- We will use an RFID tag that is a high frequency (13.56 Mhz) and passive (no battery). Passive tags must get an electrical charge from the reader antenna to respond to the reader and have a read range of less than an inch to 30 inches depending on the strength of the signal and the amount of copper antenna in the tag. Tags will also be read only, except for one bit which is read-write. That bit is either turned on or turned off, depending on whether the material is checked out or checked in.

- RFID readers will be in specially designed circulation workstations, patron self-charge stations, in security gates and in portable wands used by staff for inventory and finding missing items. Library RFID readers will only read SFPL's RFID tags.

- Library cards will not contain RFID tags and will not contain information about the library card holder or their account.

Service and Operational Benefits of RFID

Check-out will be the library function in which RFID has the greatest impact. It greatly increases the speed of the circulation process by eliminating the time-consuming process of barcode scanning and de-sensitizing the electromagnetic security strip. Multiple items (books, CD's, DVD's, videos & books on tape) can all be checked out simultaneously. RFID technology reduces the time required to check-in and check-out materials by as much as 50%.

Direct Benefits for Library Users

- Decreases waiting time for users at check-out and less labor time at the circulation desk. This frees up the staff to perform direct user services.
- Allows people on the move fast and easy transactions. Express or self check-out is easy to implement and easy to use with RFID. No need to sort materials into books, videos, CDs, etc. and handle each item separately; just put everything on the check-out station reader and it's all checked out at once.
- Improves management of the collection providing users with books ready to be checked-out immediately after being returned or to immediately fill reserves since staff will not have to individually check in each item.
- Allows users the same privacy as with the current barcode system. Currently a temporary record is kept in our online circulation system's server linking each user with material checked out on their library card. When material is returned, the record disappears. This does not change with an RFID system. There is presently no way to use the library system's circulation system to track an individual's previous borrowing record and this will be true with an RFID system.

Benefits for the Collection and User Services

- Highly efficient inventory control (the book collection) will increase ability to find a missing item and to pull requested material from the shelves. The collection can be inventoried by waving a handheld wireless wand instead of pulling each book from the shelf.
- Book check-in and sorting can be accomplished more economically and efficiently because orientation of items is not necessary. Currently the barcode has to be on the front so it can be scanned and the spine facing a certain way so the magnetic strip can be de- or re-sensitized.
- Security theft detection at the door is improved; the accuracy of detecting a stolen item is greatly increased from an average of 65% on conventional EM (electromagnetic strip) detection systems up to 100%.
- Streamline library operations associated with materials handling. For example, one tag replaces a barcode and security strip. The adding of one tag instead of two steps (adhering strip and barcode) will allow for faster processing of library materials.
- Reduce or eliminate special handling of media. Videos and audio tapes cannot be damaged inadvertently by the staff when de-sensitizing AV material since the

RFID tag can be used for all material. All material formats can be checked out simultaneously.

Direct Benefits for Library Staff

- Reduces and prevents repetitive stress injuries since equipment can be placed under a counter and staff can slide the stack of material on top of the reader instead of picking up and individually scanning every item.

- Reduces the steps in processing new books due to one tag for identification and security.

- RFID implementation will not result in staff reductions. Staff will be freed from repetitive, injury-prone tasks to work on more direct customer service including answering user questions and solving problems.

Other Uses of RFID Technology

- Automotive Immobilizer Anti-theft systems: ignition key transmits a unique identification code to an RFID reader connected to the car's computer. If code is correct, the computer allows the car to start; if not, the car cannot be turned on.

- Automotive Remote Keyless Entry: keyless entry pad button is pressed to lock and unlock vehicle doors using RFID technology.

- Card Key Security Access: employees of various industries and government agencies including the Main Library use RFID technology to enter a building and enter secure areas within a building.

- Toll Gate Travel: vehicles equipped with RFID tags on their windshields can pass through toll gates and have the tolls debited from a paid account. Example: FASTRAC (active battery tag).

- Animal tagging: pets, livestock, endangered species and other wildlife are being injected with a tiny chip under their skin with a unique ID number to track movements or theft.

Partial List of Libraries using or implementing RFID

- Berkeley Public Library, Santa Clara City Library, Peninsula Library System, Oakland Public Library Chavez Branch, Eugene, OR Public Library, Salt Lake City Public Library, Seattle Public Library, Philadelphia Free Library, Cerritos Public Library, Toronto Public Library & Utrecht (Netherlands) Public Library

RFID Technology and Reducing Risk Factors for RSI Injuries

RSI Definition

- Repetitive Stress Injuries also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs)
- RSIs are disorders of the musculoskeletal and nervous systems caused or aggravated by repetitive motions, forceful exertions, awkward posture and vibration or compressive forces (hard, sharp edges)
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels resulting in pain, tension and strains

General Risk Factors for RSIs among Circulation Staff:

- Repetition: Lifting, turning and opening books and AV materials during check-out and check-in
- Forceful exertion: Required pinch grip when picking up books and media and when opening and processing AV material
- Awkward postures of upper extremities (shoulders, arms, hands and wrists) when handling media

Specific Work Rates and Hazards at the Main Library*:

- Check-out Desk: Awkward postures and excessive handling requiring pinch grip and force to check-out items. Each piece of media must be individually handled. Workload: 12 events per minute/ 768 per hour (Highly repetitive when events exceed 3 per minute). Awkward and forceful hand/arm motions to desensitize material.
- Check-in Desk: Excessive grasping and handling to process returns. Each piece of media must be handled individually and 70% must be opened. 70% of books are being lifted, turned and flipped over in order to scan. Workload: 10 events per minute/ 575 per hour (Highly repetitive when events exceed 3 per minute)
- Sorting Room: Excessive grasping and handling to sort/process returns. Workload: 16 events per minute/ 940 per hour (Highly repetitive when events exceed 3 per minute)

Public Service Employees with Industrial Injuries:

- From January 2001 through January 2004 thirty-six (36) employees whose duties include public service have filed Worker's Compensation claims resulting in 260 loss work days; 500 modified/restricted work days; $265,000 paid costs

Summary:

- Goal is to reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material and to set up a system that will allow staff to slide material into place and have one motion for check-in and out (RFID).

*Ergonomic consultant report for 1st Floor Remodeling Project & Dept. of Public Health staff

3/02/04

RFID COST FACTS

Proposed SFPL Implementation

Year 1	Tagging of 1st floor material, all new material and all media Main self-check, staff & conversion stations, security gates & readers Equipment and tags for Excelsior Branch Library	$580,182
Year 2	Tagging of remaining Main collections Additional equipment and security gates Maintenance charges	$472,155
Total		$1,052,337

Estimated cost of converting 8,000 square foot branch with a collection of 35,000 items $85,000

RFID tags combine functions of current barcodes and security strips into one tag. Tag costs are higher than current barcode/security strip costs but are decreasing.
Media RFID tag - $1.45 Media barcode/security strip - $.974

RFID self-check stations cost less than current equipment.
RFID self-check station - $9,000 3M self-check - $22,000

Funding to provide security strips, barcodes, security gates, check-out stations and maintenance is included in the Library's current operating budget to support the RFID implementation or to continue the current system.

Mitigate worker's compensation payments from RSI (repetitive stress injuries) - $265,000 from 1/01- 1/04. Create safer work environment to prevent further injuries.

SFPL 3/4/04

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
March 4, 2004
RFID Bibliography

Organizations

- Association for Automatic Identification and Mobility (AIM) http://www.aimglobal.org/technologies/rfid/
- Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN): http://www.nocards.org/
- Electronic Frontier Foundation: http://www.eff.org/
- Electronic Privacy Information Center: http://www.epic.org/privacy/rfid/
- EPCGlobal: http://www.epcglobalinc.org/
- Privacy Rights Clearinghouse: http://www.privacyrights.org/

Articles and Reports

- American Library Association - Intellectual Freedom Committee, RFID: Radio Frequency Identification Chips and Systems. http://www.ala.org/ala/oif/ifissues/rfid.htm
- Brian Bergstein, "No-swipe credit cards on their way", San Francisco Chronicle, December 14, 2003.
- Kevin Bonsor, "How E-Z Pass Works." http://auto.howstuffworks.com/e-zpass1.htm
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- "The ROI of Privacy Invasion", RFID Connections, January 2004. http://www.aimglobal.org/technologies/rfid/resources/articles/jan04/0401-roispy.htm
- Santa Clara City Library: Making the Decision to Change: http://library.ci.santa-clara.ca.us/rfid/02_decision.html

Health and Safety

- Federal Communications Commission, Office of Engineering and Technology. Radio Frequency Safety. http://www.fcc.gov/oet/rfsafety/
- United States Department of Labor, Occupational Safety and Health Administration. Non-Ionizing Radiation: Radiofrequency and Microwave Radiation. http://www.osha.gov/SLTC/radiofrequencyradiation/

Glossaries

- http://www.rfidusa.com/rfid_glossary.html
- http://www.rfidjournal.com/article/articleview/208
- http://www.aimglobal.org/technologies/rfid/resources/papers/rfid_glossary_of_terms.htm
- http://www.stores.org/archives/2003/06/sidebar_1.asp

View from the top left corner

RFID: Helpmate or Conspiracy?

by MICHAEL SCHUYLER

RFID, Radio Frequency Identification. If it weren't for the coiled antenna on the tags you would hardly be able to see them. Place your library card and a stack of books in close proximity to an RFID reader and your books "automagically" check out. Take inventory with a wave of a wand. Sort books by subject without human intervention. Experience courteous and efficient self-service, made possible by a chip no bigger than a grain of sand.

But wait! Don't you know? RFID is a conspiracy. It's been called "the worst thing that ever happened to consumer privacy" by CASPIAN: Consumers Against Supermarket Privacy Invasion and Numbering. They tell all the sordid details at http://www.nocards.org. They envision a "marketer's war against consumers" led by RFID technology tagging everything we buy, everything we wear, and, more to the point, everything we check out of our local libraries.

OME WATCHDOG GROUPS CLAIM THAT RFID TAGS ERALD THE END F CONSUMER PRIVACY. I SAY RFID USAGE IN LIBRARIES CAN KEEP RECORDS MORE PRIVATE N IN THE PAST.

Whoa! How did we get from WalMart to the local story lady? The Electronic Frontier Foundation ("Defending Freedom in the Digital World") has written to the San Francisco Library Commission deploring even the mention of RFID in the library's long-range plan. The group writes, "EFF opposes any use of RFID technology unless the planned implementation includes mandatory deactivation ("mandatory kill") of the RFID tags at the point at which the patron leaves the library" (letter dated 10/1/2003 available at http://www.eff.org).

One would have hoped that an organization such as EFF, which bills itself as technologically savvy, would have understood that "killing" an RFID tag as it leaves the library is the same thing as ripping off the bar code, thus leaving no way to track the material. But it might be worthwhile to examine what all the fuss is about and to suggest a solution, at least insofar as libraries are concerned.

It Was Once Worse

Libraries have actually come a long way in protecting the privacy of patrons. It didn't used to be that way, and it is technology that has made it all possible. In the first library where I worked, the patron wrote his or her name down on a book card. The book card contained the call number, author, and title at the top, plus a complete record of who had checked out that particular copy. Upon checkout the card was replaced by a date due card, but when the book was returned, the book card was re-inserted before the book was placed back on the shelf. Anyone browsing the collection could instantly tell who had checked out any copy. Indeed, an entire record of all patrons' reading histories existed in the stacks as sort of a loose database of cards and pockets.

The second library where I worked used a variation on this scheme. You wrote the library card number on the book card. I remember helping patrons at circulation and often seeing people check out the same book over and over as they hauled out stacks of mysteries and westerns they had already read. It was obvious because the library card number stayed on the book card itself, once again a history of circulation for that item.

The third library had yet another variation. In this scheme we used Gaylord "kerchunker" machines. That was library "automation" for the time. They plugged in. A solenoid slammed the metal date bar on a card as it tore off a hanging chad. The chads occasionally caught fire, which burned the rubber on the solenoid and caused an awful stink.

The patron signed a signature sheet next to a number. That same number was punched onto the book card along with the due date by the "kerchunker" and filed away. The number was impermanent in that it wasn't assigned to a single person. You could trace the history as long as you kept the signature sheets, which were in the large file cabinets behind the circulation desk.

Bar Codes (and RFID) Actually Help Privacy

It wasn't until the advent of bar codes that this vast database of circulation history effectively disappeared. We all insisted on it in our RFPs. The systems were to erase any link between borrower and book upon a successful check-in. That's true of bar-code-based systems today. It's also true of RFID systems.

The only way you can trace an RFID number back to the borrower is by accessing the circulation records as long as the material remains checked out. That's true of bar codes as well. In both cases, the number on the bar code or RFID tag has little meaning by itself. If you know the structure you can identify the library where the bar code came from and the fact that it is an item or patron code, but beyond those two points there is nothing that identifies subject matter.

So follow the scenario of privacy invasion. Somehow the Bad Guys have to be waiting outside in the library parking lot or maybe at the door of a supermarket. Note that these "Bad Guys" aren't garden-variety criminals. By definition they are institutional, either government agents of some sort or marketing types intent on deciphering our habits well enough to sell us more stuff and control our behavior and spending. In any case, they zap our bags with high-performance readers. Those aren't invented yet. The readers have a range measured in inches, but they *could* be invented, probably, at least some people think so, therefore it's still a problem.

"IF THE BAD GUYS ARE INTENT ON SCANNING YOU, THE LIBRARY IS LARGELY IRRELEVANT."

Now the Bad Guys have a record of what amounts to a bar code inside an RFID tag. Nothing much else will fit so there's no room for titles and other identifying information. Being really smart guys they immediately decipher that this tag belongs to Geoduck Public Library, so they call up Geoduck's OPAC from the convenience of their lair and look up the material by bar code number. They figure out the books checked out have to do with a subject in which they are interested, so they revel in their success.

If I were a Bad Guy, I don't think I would bother with all that. I'd just trot down to Geoduck Public and present the director with a subpoena based on the USA PATRIOT Act. I'd find out what my suspect had currently checked out and be on my way. If the PATRIOT Act provisions get repealed, I'd just get a regular subpoena, which I could have done all along anyway, and get the same information. That's a lot easier than using all this technology.

I was discussing this issue with Mike Bloomberg of Augsburg College on the SYSLIB mailing list and he pointed out that none of this is necessary at all. In a world filled with RFID tags you just scan the ISBN number of a book, checked out or not, and tie that to the RFID tag on your driver's license. The ISBN number is meaningful because it ties directly to a unique title and publisher. Unlike a bar code number, which is randomly assigned to material, the title is built into the tag. If the Bad Guys are intent on scanning you, the library is largely irrelevant.

The EFF is not deterred by the fact that killing RFID tags won't work for a library that is in the business of tracking items from cradle to grave. It just changed reasons why you shouldn't use them. In discussing the plans of the Berkeley library using RFID tags, it said, "Libraries can be the poster children for RFID. People will think if they're OK here, they're OK anywhere else" (Lee Tien, EFF, quoted in the *Berkeley Daily Planet*, 10/10/03).

What is implicitly true in Tien's statement is that libraries are a small part of RFID. It's already everywhere. Do you have a late-model car with one of those key chain buttons that unlocks your door for you? That's an active (as opposed to passive) RFID tag. The key you use to turn the ignition also has an RFID tag inside that interacts with a reader in your steering column. If it doesn't match, the car won't start. RFID is used in some filling stations (soon at a convenience store near you) and to pay bridge tolls for commuters with a "Fast Track" pass.

Subscribe to GM's OnStar, use a GPS navigation system in your car, or turn your cell phone on and the Bad Guys know right where you are all the time. If you are wanted by authorities and you use your credit card, the police are notified. Obviously, those finding themselves in such a situation should use cash only.

The point here is that tracking technologies are already deployed and could

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be used even though they might not be today. That's an argument against the PATRIOT Act when it was revealed that it had not been invoked. It remains a "blank check" that has not yet been cashed, therefore it is still a problem. RFID tags, by definition, are a problem.

Here's How RFID Could Possibly Work in Libraries

The fact is RFID is coming. It doesn't matter how many people stand out in front of Safeway bemoaning the Club Card tracking their potato-chip-buying habits. These tags will become so cheap and track their products so well that they will replace bar codes, by and large, by the end of the decade. Libraries are already installing them. Maricopa County is in the midst of implementing. Seattle Public will have them on opening day. Dozens of libraries around the country are already up and running.

So what can we do?

First, turn off bar code indexes for the public. I know it's a stretch, but we're not talking about reality here. We're talking about possibility, the infinite reach of creativity applied to the what-if statement, and no small amount of paranoia. Let's just admit that and see if we can fix it.

Second, establish a library standard that does not allow for RFID tags that can hold more than a standard bar code plus a security bit. That means no RFID tags that hold checkout histories, bibliographic information, or anything that would identify the book itself and be subject to scanning.

Bar codes themselves are random and mean little. Keep it that way. The systems today very likely meet that standard, though 3M's 256 bits bears checking. One of the negative points touted today is basically, "Well, yeah, today. But tomorrow that can change!" Fine. Create a standard that insists this doesn't proliferate. Make it an RFP point.

Establish a testing system to ensure vendors are supplying the type of RFID coding above. This "quality assurance" could guarantee vendors are conforming to the standard. Random checks of installed systems would ensure compliance and provide "certification." This would certainly help assure most citizens.

I believe the RFID ISBN is going to happen for economic reasons. Therefore, establish a method of disabling ("killing") ISBN tags as part of the library processing step. My guess is you could create a portable and easily used "scanner" that could zap the ISBNs prior to final processing. Or stick the books in the microwave for a few seconds. You would essentially be replacing an *identifiable* RFID ISBN tag with a *random* bar code that means nothing out of context of the library's ILS. How's that for a proactive approach?

Lastly, have library privacy policies that specifically address RFID technology and explain how the library is protecting privacy, addressing some of the issues above.

If you did all this you would have a situation where libraries were the one place you could check out a book and *not* have it be trackable. Technically, it fixes the problem. It doesn't fix the issue that EFF has, which is that if someone sees libraries using RFID tags they will think it is OK, but I see no real difference from the government telling me what I ought to be worried about as opposed to the EFF telling me what I ought to be worried about.

By adopting policies and procedures as outlined above, libraries might be able to influence bookstores and other outlets to do the same. That would put librarians at the forefront of solving this problem in a positive way. It could even influence the consumer market as well. ■

Michael Schuyler is deputy director for the Kitsap Regional Library System in Bremerton, Wash. His e-mail address is michael@krl.org.

Technically Speaking

RFID Poses No Problem for Patron Privacy

by David Dorman

A recent onslaught of articles coming out of California newspapers reported on the use of Radio Frequency Identification (RFID) tags in public libraries and how they will strip away the reading privacy of library patrons (See News this issue). The concern has even been picked up and professed by some librarians who should know better. The devil, as always, is in the details. And the critical detail with respect to library use of RFID tags is that only two types of information are contained in these tags. One is a single bit (on or off) indicating whether the book has properly left the library. Pretty harmless, that.

The other is a set of fields designed to hold information about the book itself. Library RFID tags do not contain any patron information whatsoever. And most RFID implementations contain only one field of information about the book—the bar code number.

Forgive me for being skeptical of all the hullabaloo, but I just can't get too worked up about a library book broadcasting its bar code for several feet to any and all who care to lug around portable RFID readers and eavesdrop on the reading habits of passersby carrying library books. However, if that thought bothers some folks, I recommend they campaign for encrypting the barcode number in the RFID tag rather than foment (or buy into) vague apprehensions about a very useful and rather benign library inventory control tool. For a well-written, thorough, and balanced treatment of RFID and Patron Privacy, check out the paper "Personal Privacy and the Use of RFID Technology in Libraries" by Vinod Chachra and Daniel McPherson at www.vtls.com/documents/privacy.pdf.

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RFID privacy scare is overblown
NOVEMBER 24, 2003 (COMPUTERWORLD)
Opinion by Jay Cline

The privacy scare surrounding radio frequency identification (RFID) tags is greatly overblown. No company or government agency will be secretly scanning your house, as is feared, to find out what products you've purchased. There is no feasible way to do so. But if RFID chip makers don't soon allay these fears, the escalating public emotion around this issue may effectively ban the most valuable implementations of this remarkable technology.

What are these mysterious devices? An RFID tag is a microchip the size of a grain of sand that transmits information to a nearby scanner. Typical chips store 96 bits of data and transmit a 125-KHz RF signal. Experts say that capacity is enough to send a product serial number to a scanner a few feet away. Although this capacity is limited, many companies see a revolution in the making. Hospitals imagine a day when RFID tags will prevent medical errors by transmitting the correct medicine dosages to nurses. Automakers hope similar tags will be able to transmit wear-and-tear information on vehicles before serious problems occur. Postal services see speedier parcel scanning and tracking. Appliance makers and food producers envision faster and more targeted recalls of defective products. Clothing and shoe stores expect faster customer service as RFID tags help identify items of the right size. Clothes manufacturers hope the tags will be able to tell washing machines how to best wash items. The music industry sees the technology reducing piracy, and the federal government hopes RFID tags will help combat counterfeiting and speed bag-checking at airports.

Sound too good to be true?

Wal-Mart Stores Inc. and the Pentagon don't think so. They're counting on savings of several billion dollars that RFID tagging will bring them in the form of lower inventory-management costs. Items will no longer need to be individually hand-scanned, expediting product loading, invoicing and customer checkout. Scanners might be placed on shelves to speed restocking and at building exits to prevent theft. These lucrative benefits prompted both organizations to announce recently that their suppliers must tag their cases and pallets with RFID chips by January 2005 in order to continue doing business with them.

The story gets better. Analysts see these dual mandates causing a domino effect throughout the world economy. Procter & Gamble Co. -- which sells 17% of its goods through Wal-Mart -- expects pallet-level tagging to improve the speed by which it replaces out-of-stock products. P&G sees the technology boosting total revenue by $1.2 billion per year, nearly a 3% increase. Accenture Ltd. estimates that RFID adoption will cause retailers to enjoy an average 3% climb in revenue. Japanese analysts project a worldwide benefit of $276 billion by 2010.

So what's the problem?

Privacy advocates are concerned about tags on products continuing to emit signals in the parking lot, on the road and at home. They're worried that by using charge cards or loyalty cards during checkout, customer identities could be written to the tags. In the worst scenario, they imagine stalkers and thieves scanning cars and homes for expensive goods and personal information.
Some companies are already experiencing a customer backlash with their product-level tagging trials. Customers of a New York clothing store recently reacted against the prospect of their clothing sizes being beamed into the air. Wal-Mart reportedly had to cancel a pilot where it tagged packages of high-end razor blades because of strongly negative consumer feedback.

Stories of person-level tagging have only heightened fears of a Big Brother world coming to fruition. In Mexico, some children have reportedly been implanted with RFID chips under the skin so they can be tracked if they're kidnapped. A company in Brazil has supposedly implanted chips into the skin of its employees as their means to gain building access. Closer to home, a school in Buffalo is requiring students to wear RFID-tagged badges around their necks to track arrival times, and a prison is using RFID wristbands to monitor inmates. Some have speculated on the benefit of implanting in people RFID chips containing their medical and criminal histories. With friends like these, does Wal-Mart need any enemies?

The hype around RFID systems has certainly outpaced reality. Manufacturers and retailers have yet to agree on a universal electronic product code, the RFID equivalent of the Universal Product Code used in bar codes. RFID scanning is also far from error-free. But more importantly, RFID signals are so weak that they're easily blocked by metals and dense liquids. It's completely infeasible today for a vehicle to pass down your street and intercept signals from RFID-tagged goods inside your home.

The economics of RFID chips are also limiting how they're used. The most basic read-only chips cost 5 to 50 cents apiece. More complex chips that are read-write and have a wider broadcast range can cost several dollars each. Until these prices approach a penny, RFID chips will be mostly used at the case and pallet level, clear of any personally identifiable activity. Because of these technology and cost limitations, the world will have several years to identify the privacy controls we want to see in RFID systems.

Several companies are already creating these privacy controls. In recent meetings, chip makers and users discussed how the universally accepted principles of data privacy could be built into the RFID process. A top priority was notifying customers that certain items were tagged with these transmitters. The companies discussed accomplishing this by adopting a common RFID logo to place on product packages. To give customers the ability to turn off the transmitters, the firms plan to make them peel-offs. RSA Security Inc. is also developing a chip that could be worn on watches or bags that would block nearby RFIDs from transmitting certain information. All in all, the RFID privacy ball is rolling.

The gathering storm against RFID tags may soon outpace these positive efforts and make product-level RFID tagging taboo. RFID makers and users should take a time-out from their technical discussions and start talking more with the public about what's going on. Their dreams of big economic returns may well depend on it.

THE FINANCIAL PAGE
EZ DOES IT

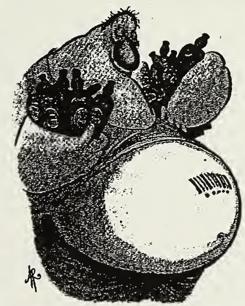
Among the three million or so items in the Smithsonian's National Museum of American History is a ten-pack of Wrigley's Juicy Fruit gum, which was sold for sixty-seven cents at the Marsh Supermarket in Troy, Ohio, in 1974. The gum was ordinary enough, except for one thing: this was the first item ever to have its bar code scanned at a checkout counter.

Three decades later, the bar code seems indispensable. Five billion items have their bar codes scanned each day; those little swatches of numerals and lines are so ubiquitous that they're practically invisible. Companies rely on bar-code data to keep their shelves stocked and their inventories lean. And yet, to hear those companies tell it, the bar code's expiration date may be nigh.

That's because a successor has emerged, a technology called radio-frequency identification (R.F.I.D.), which relies on a computer chip and can convey far more information than most bar codes. Inte-ted into the chip is a little antenna that smits the information via radio waves. You may already be using R.F.I.D.—for example, if you have an EZ-Pass, which enables your car to zip through a toll booth without stopping. Farmers use R.F.I.D. tags to keep track of cattle. Manufacturers use them to track high-priced components. Mobil Speedpass customers use them to buy gas. But some of the biggest companies in the world have grander ambitions: they envision a future in which R.F.I.D.s are embedded in everything we buy—every can of soda, box of detergent, and pair of shoes. Products will be tracked continuously, from factory floor to checkout aisle. Checkout will take only seconds. There will be no more shoplifting or shipments that fall off trucks or items that are out of stock. Inventory will flow like water in a mountain stream. Or so the story goes.

Companies like the idea of R.F.I.D. because, even in this technology-rich economy, making and selling stuff is harder than it ought to be. In a typical e, eight per cent of the items are out o stock—at any moment thousands of products that customers want are piled up in back rooms or warehouses. In economics textbooks, supply flows in a smooth and orderly fashion, but in the real world it's often a panicky mess of misplaced inventory and mistimed forecasts.

In the sixties, a group of researchers at M.I.T. devised a simulation called the beer game. Participants play one of four roles: the brewer, the distributor, the wholesaler, or the retailer. (No one, sadly, gets to be the customer.) The retailer, who knows how much beer has been consumed in a given week, orders from the wholesaler, who orders from the distributor, who orders from the brewer. The goal is for everyone to have enough beer to satisfy demand but not so much that it can't all be sold. Sounds easy enough. In fact, soon after the game starts, chaos erupts. Instead of a nice, even flow of beer, you get wild oscillations; the players veer from having too much beer to too little, and back again.



The beer game demonstrates what's often called the "bullwhip effect," whereby a small change at one end of the supply chain—a minor spike in demand for Sam Adams—causes much bigger changes at the other. Manufacturers and distributors often have only a dim idea of what consumers are buying; the uncertainty gives rise to overreaction. A classic example comes from Procter & Gamble's experience in the diaper business. The demand for diapers stays pretty constant, since the number of babies doesn't change much from month to month. But P. & G. found that even small variations in the number of diapers sold by retailers led to wild swings in the number of diapers that it was making and that distributors had on hand.

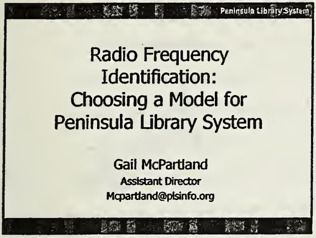
The bullwhip effect is a result of bad information. So an obvious solution is to make the information better—to let everyone know what's happening as it's happening. That's where R.F.I.D. comes in. Bar codes are cumbersome and passive: they won't tell you anything unless you scan them by hand. An R.F.I.D. tag can effectively act on its own. Promoters of the new technology—most notably the Cambridge-based Auto-I.D. Center, a partnership of five research universities and almost a hundred major companies—predict that a store's products will keep up a constant chatter ("Hey, I'm expiring over here!" the carton of milk will say) and let distributors know when stock is getting low. The data will be collected online instantaneously; the result is what's known, in *Business 2.0*-speak, as "instant supply-chain visibility."

Before any of this can happen, R.F.I.D. technology needs to get a lot cheaper, and its boosters need to assuage the privacy concerns of people who are leery of a little chip that could enable someone to track every bottle of pills in their medicine cabinet. (The Auto-I.D. Center insists that tags will be "killed" at the checkout counter, as clothing sensors are.) Earlier this year, though, Wal-Mart announced that it was requiring its top hundred suppliers to use R.F.I.D.s on their supply pallets by 2005. And where Wal-Mart goes, just about everybody soon follows. As it happens, the bar code became a mainstream success only after Wal-Mart adopted it, in 1980.

Wal-Mart is already the world's most efficient retailer. It may know more about what's on its shelves, and keep its supply chain running more smoothly, than any big chain in the world. But, like every other company these days, it is under constant pressure to become more productive. For all its power, Wal-Mart makes less than four cents on every dollar of sales. Major supermarkets make less than two cents. So even if R.F.I.D. will save only a few cents on each item sold, it's an innovation that Wal-Mart and its competitors have to have. A few pennies here and a few pennies there, and pretty soon you're talking about real money.

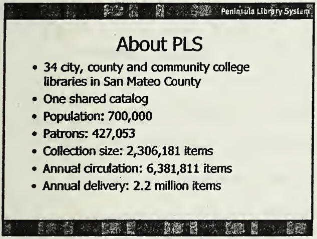
—*James Surowiecki*

ARNOLD ROTH


Peninsula Library System

Radio Frequency Identification: Choosing a Model for Peninsula Library System

Gail McPartland
Assistant Director
Mcpartland@plsinfo.org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About PLS

- 34 city, county and community college libraries in San Mateo County
- One shared catalog
- Population: 700,000
- Patrons: 427,053
- Collection size: 2,306,181 items
- Annual circulation: 6,381,811 items
- Annual delivery: 2.2 million items

Peninsula Library System

Why RFID?

- New/Renovated Buildings = Increased use
- Smaller budgets = closed hours, fewer book purchases, smaller staff
- Goal to maintain service levels during times of increased demand and diminished resources

Peninsula Library System

Case Study: San Mateo Public Library

- Renovating 2 branches
- Building new Main library with assistance from Prop 14 monies
- Severe budget constraints
- Anticipated exponential increase in use
- Installing RFID and sorting system to re-deploy staff to public service desks

Peninsula Library System

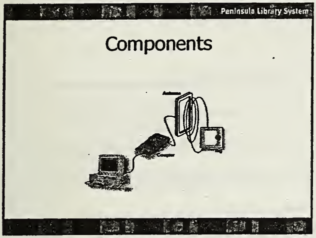
RFID in PLS

- Started RFP process fall 2002 – spring 2003
- Shared catalog means all members must agree on chosen technology
- PLS Core Issues:
  - Meet or beat current performance standards for customer service
  - Network security and performance
  - Stable technology
  - Enhance basic library values, e.g. privacy
  - Affordable

Peninsula Library System

How It Works

- Tag enters RF field
- Coupler's RF signal powers tag
- Coupler sends a signal
- Tag receives the signal and returns its data to the reader
- Coupler sends data to computer
- Computer transmits new data through coupler to tag



Peninsula Library System

Components

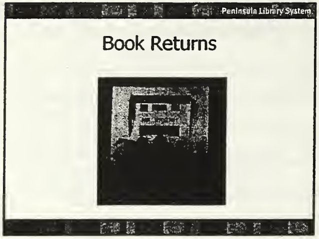
Peninsula Library System

Other Components Add to Effectiveness

- Self-check
- Book returns
- Sorting Systems
- Inventory control wands

Peninsula Library System

Self-Check



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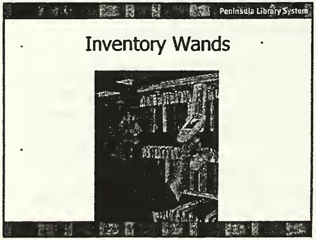
Book Returns

Peninsula Library System

Sorting Systems



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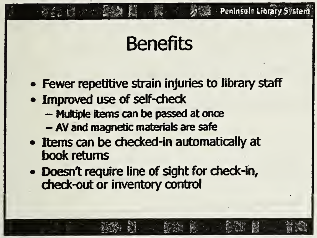
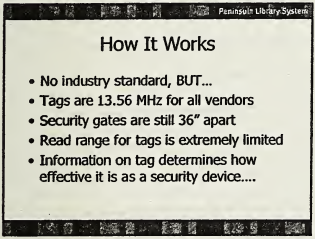
Inventory Wands



Peninsula Library System

Benefits

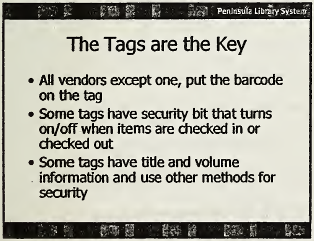
- Fewer repetitive strain injuries to library staff
- Improved use of self-check
  - Multiple items can be passed at once
  - AV and magnetic materials are safe
- Items can be checked-in automatically at book returns
- Doesn't require line of sight for check-in, check-out or inventory control



Peninsula Library System

How It Works

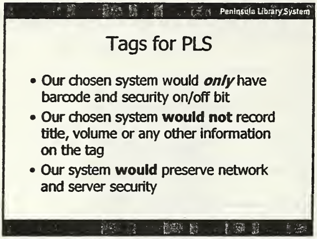
- No industry standard, BUT…
- Tags are 13.56 MHz for all vendors
- Security gates are still 36" apart
- Read range for tags is extremely limited
- Information on tag determines how effective it is as a security device....



Peninsula Library System

The Tags are the Key

- All vendors except one, put the barcode on the tag
- Some tags have security bit that turns on/off when items are checked in or checked out
- Some tags have title and volume information and use other methods for security



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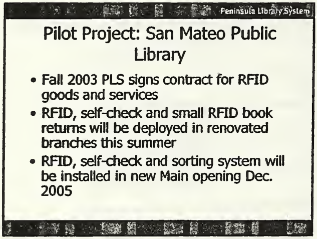
Tags for PLS

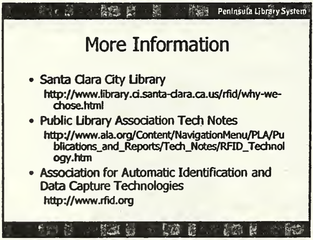
- Our chosen system would ***only*** have barcode and security on/off bit
- Our chosen system **would not** record title, volume or any other information on the tag
- Our system **would** preserve network and server security



Peninsula Library System

Pilot Project: San Mateo Public Library

- Fall 2003 PLS signs contract for RFID goods and services
- RFID, self-check and small RFID book returns will be deployed in renovated branches this summer
- RFID, self-check and sorting system will be installed in new Main opening Dec. 2005



Peninsula Library System

More Information

- Santa Clara City Library
  http://www.library.ci.santa-clara.ca.us/rfid/why-we-chose.html
- Public Library Association Tech Notes
  http://www.ala.org/Content/NavigationMenu/PLA/Publications_and_Reports/Tech_Notes/RFID_Technology.htm
- Association for Automatic Identification and Data Capture Technologies
  http://www.rfid.org

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Thu 04 Mar 04 07:44 -800 GMT

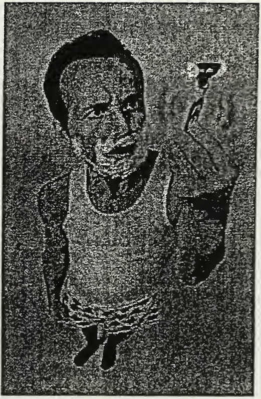
FEATURE ARTICLE

COVER STORY

They Know Where You Are

New technologies can pinpoint your location at any time and place. They promise safety and convenience—but threaten privacy and security

By Jay Warrior, Eric McHenry & Kenneth McGee



The terrorist blast had destroyed the office building. Piles of glass and concrete littered most of a city block, the air was thick with dust, debris still smoldered. The police had no suspects but had already sent out an all-points alert. Then, when troopers pulled a van over for making a couple of risky lane changes, they found a pile of fertilizer sacks and an empty fuel-oil drum in the back. A duffel bag held a change of clothes, a small kit with a new razor and other toiletries, and a .45-caliber pistol. The truck had been stolen, and the driver wasn't talking.

Within an hour, some 1000 km away, an FBI team walked into a Wal-Mart with pictures of the arrested man. One of the cashiers recognized the face. "There were four of them," she said. "One of our regular customers said they were friends visiting from out of town—but that guy's a loner. He lives out on County 15."

This may sound like the start of a mediocre TV drama. But given recent events—and coming technical advances—it just might be a scenario pulled from tomorrow's news. Here's the rest of the story: a bit of microcircuitry called a radio frequency identification (RF-ID) tag was embedded within the package of razor blade cartridges in the suspect's toiletry kit. The manufacturer inserted it into that package, and all others of its kind, to let retailers track inventory cheaply and conveniently. But because the tag carried a unique identifying code, the FBI could scan it, check it against a database, and then track down the store where the razor was purchased.

The future, in this case, is already here. This past January, the Gillette Co. (Boston) announced that it would purchase up to half a billion RF-ID tags to put on its Mach3 and Venus razors and razor blade packages. The tags, which contain chips that respond to an RF field from a scanner, are now being used in a test by Wal-Mart Stores Inc., by the UK-based grocery chain Tesco PLC, and most recently by Metro AG, Germany's largest retailer, to determine whether the technology can streamline inventory management and save retailers billions of dollars a year in supply chain costs.

It's not much of a stretch to imagine this relatively benign way of tracking goods being put to other, more dramatic uses. Indeed, RF-ID tags are only one example of a coming wave of wireless communications technologies that will be everywhere in the next year or two, merging location and time-related information.

The most spectacular of these will be large-scale systems that piggyback on cellular networks to locate any cellphone on the network—in other words, in the near future, your whereabouts won't be a secret if you are carrying your cellphone. Other plans revolve around smaller-scale technology that will, for example, let you buy an item merely by pointing at it with your cellphone.

The commercialization of these technologies promises to make your life safer, easier, and more enjoyable by providing instant, personalized information. It might even save your life by helping rescue officials find you in an emergency, no matter where you are.

But these benefits will almost certainly cost you some privacy. In the case of the tagged razor blades, the loss will be small and incremental; with cellphone tracking, it could be substantial and potentially intrusive. So, in coming months, expect some clashes as watchdog groups, businesses, and governments try to find common ground and deliver the benefits of location tracking with the least possible intrusion.

Enhanced 911

The current push for location-based services in North America started in 1996, when the U.S. Federal Communications Commission (Washington, D.C.) passed its much-debated Enhanced 911 (E911) mandate. This rule, revised in 1999, requires wireless carriers to be able to locate, within 50 to 100 meters, any wireless phone calling 911, the U.S. nationwide emergency service number. The object is to let emergency operators pinpoint where a call comes from so that responders can find you if you don't know your location, cannot speak properly, or get cut off. U.S. wireless operators currently have until December 2005 to comply with this proviso.

In the meantime, rollout of the capability has already begun in some places. Since late 2002, for instance, the entire Sprint PCS network has had an emergency locator capability. Another network, Cingular Wireless, has successfully tested a location technology in Wilmington, Del.

This location technology requires few modifications to cellphones. Location methods may, but often do not, make use of information from the Global Positioning System (GPS), the constellation of U.S. military satellites that are used to guide everything from bombs to ordinary passenger cars. Exactly how the location technology is implemented depends on the underlying cellphone network.

In Europe, the prevailing cellular standard is the Global System for Mobile Communication (GSM), which is also now taking root in the United States. For GSM networks, the location technology of choice is called Uplink Time Difference of Arrival. This technology depends on a form of triangulation: it requires at least three cellular base stations to receive a signal from the wireless handset, and then computes the location from the differences in arrival times of the three signals. Accuracy is best in urban areas of dense base-station coverage. The technique does not require that subscribers buy new handsets, and it does not affect network performance.

A drawback is that location measurement units costing as much as US $10 000 must be installed at each base station. The dominant cellular technology in the United States, time-division multiple-access (TDMA), also typically uses the Uplink Time Difference of Arrival method for determining location.

Meanwhile, code-division multiple-access (CDMA) networks, which is a spread-spectrum method of communications that is making inroads into TDMA, are turning toward a location technology called Assisted GPS, which, as its name suggests, makes use of the satellite network.

With this method, the wireless carrier or an independent GPS reference data-feed service sends "hints" to the mobile phone via the network, using information from GPS receivers deployed at the various cell sites. These hints suggest the GPS satellites that will give the quickest fix on the position. These hints are particularly necessary when the phone is indoors and GPS reception is more limited.

A server and GPS receiver must be installed at each cell site, for a total cost of $2000 per site. A GPS receiver is also built into each handset. Accuracy is good outdoors, particularly in rural or suburban areas, where satellite signals can be received easily, but may be poor indoors, where satellite reception is obstructed, and in urban areas. Examples of networks using this technology include those operated by Sprint PCS, Verizon Wireless, and Nextel Communications.

The benefits of location technology aren't limited to subscribers—it will also help wireless carriers improve their systems, by making every enabled handset an instrumentation probe. The handsets will be able to provide information on signal quality by geographic location, providing instant information on problem areas. Today, technicians gather that kind of information by driving to specific sample sites and making measurements, a time-consuming and inefficient solution.

For now, mandating mobile location service is strictly a North American phenomenon. In Europe, the 911 equivalent, 112, is currently available only on wire-line telecom networks, but beginning 24 July 2003, both wire-line and wireless carriers will legally be required to deliver location information on 112 calls—Enhanced 112 (E112). There is no accuracy or technology mandate in delivering this capability; carriers need only do whatever is technically feasible for their network.

So most European Union wireless carriers will use Cell-ID positioning to fulfill these requirements. This very basic form of location technology uses the latitude and longitude of the cell site handling the call as an approximation of the phone's position. The level of accuracy depends on the size of the cell site's coverage, and varies from hundreds to thousands of meters.

Pay by phone

Though North America is forging the way in emergency aspects of cellular-based location technology, it is lagging behind Europe, and especially behind Asia, in commercial uses. For a glimpse of what's to come, consider Tokyo, where a cellphone is, well, more than a cellphone. Sitting in your car, you can easily use it to get localized traffic updates, weather reports, street-by-street navigation assistance—and even find out the location of the nearest Starbucks [see diagram]. Coming soon in various regions (for better or worse): you will be able to opt in for personalized advertising—instant notification, for instance, as you walk by your local drugstore, that your favorite brand of toothpaste is on sale.

Vending machines present another world of opportunity. Imagine being able to walk up to such a machine and buy something with a few keystrokes on your mobile handset. No bills or coins or ATM or debit cards are needed. All that is required is a network precise enough to recognize your location relative to the vending machine and a micro-billing system to debit your bank account or add to your cellphone bill.

Coming soon (for better or worse): opting in for location-based personalized advertising

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To create a seamless, easy-to-use vending system that allows cellphone billing, however, the 50- to 100-meter accuracy of the coming cellular location technologies won't be good enough. Trying to find out what is good enough, wireless carriers in Europe and Asia are running several trials using hybrid approaches such as toll-free numbers to call in machine identification information or scanners on vending machines for bar codes displayed on the phone screen [see diagram]. But developing and implementing the infrastructure—the compatible vending machines and handsets, the more sophisticated location technology—won't be cheap. And billing and roaming arrangements will be complex.

In the interim, however, a number of smaller-scale—and cheaper—technologies can position people and objects even more precisely than cellphone-based systems, but they work over much shorter distances—that is, from just a few meters to a few hundred meters.

Near instead of far

What good are they? Suppose you want to make sure your child doesn't stray too far from you in a crowded store. Or suppose a hospital wants to know where the nearest doctor is. Or perhaps your smart house needs to know who is in what room so it can adjust the temperature settings to an individual's personal tastes. Applications like these require precise, but short-range, location sensing.

One solution being considered for distances under a kilometer is ultrawideband, a technology that works by broadcasting many short data pulses over a wide spectrum of frequencies. It is a fairly simple technology to implement, and provides excellent accuracy in the range of half a meter to 10 meters. Potentially, it could be used up to hundreds of meters under current licensing.

In commercial applications, ultra-wideband receivers about the size of cigar boxes and costing, at this early implementation point, around $2000 could be positioned throughout a busy facility such as a factory or a hospital. The receivers would keep track of equipment and personnel, all of whom would be wearing small, low-power transponders not much bigger than poker chips and currently costing around $25 each. Parco Merged Media Corp. (Portland, Maine) currently offers hospitals a real-time location system similar to this.

Another ultra-wideband technology developer, Aether Wire & Location Inc. (Nicasio, Calif.), foresees its ultra-wideband "localizers" as coin-sized transceivers, accurate to within a centimeter at a distance of 1 km, embedded in personal safety devices (that child in the mall again). The company also projects using the receivers for such mundane operations as inventory control systems, and for such futuristic ones as "cybernetic servants" and autonomous vehicles guided by localizers placed along the side of a road.

Of course, lots of applications don't need localizing nodes with real processing power. Consider a scenario in apparel retailing. A woman walks into a dressing room carrying a dress. She tries it on and looks in the mirror. Meanwhile, a terminal in the corner of the room displays the dress with a variety of accessories. It has identified the dress using a pinhead-sized tag incorporated into the garment's label. This is exactly what Italian fashion designer Prada has operating in a dressing booth in a New York City store, where RF-ID tags are on all the clothing.

These RF-ID tags can be made much smaller and cheaper than ultra-wideband nodes, and they can be attached to just about anything. Each tag contains an antenna and a simple integrated circuit. It sends identification data in response to a query from a reader or scanner at distances of centimeters to meters. The tags can be passive, borrowing energy from the scanner's RF signal to send their reply, or they can be active, with battery power and the ability to transmit their own signals. While the tags use security codes and encryption, they can be as small as Hitachi's 0.4-mm^2 chip. Originally designed to operate at around 134 kHz, today they work in frequency ranges extending as high as 5.8 GHz for longer-distance applications.

Manufacturers like Gillette, the Gap, Marks & Spencer, and Benetton are already integrating these devices into labels, weaving them into fabric, or embedding them in paper or bindings. They cost about 50 cents today, and there's no reason why they can't cost 5 or 10 cents in a couple of years.

In an antitheft application, the tags send position information to scanners, which in this case do not need to be in the line of sight. The scanning system records the information and can send an alert, for example, if the tag is not properly deactivated when an item leaves the store.

In more customer-friendly applications, the same technology might be used to drive electronic displays—like the one in the Prada dressing room—or advertisements displayed on your grocery cart. Retailers can consider including other data in their systems, like credit card limits and past purchases. They can employ other technologies, like e-mail alerts via your cellphone, to provide such services as an instant discount on accessories to go with that new computer you just bought.

Big Brother?

Before we can enjoy these benefits, we'll have to work out some prickly privacy issues. The thorniest, arguably, concern the fact that location technologies can theoretically create a trail of what you've been doing and where you've been doing it. And if investigators bother to correlate information from different databases, the picture could be quite detailed.

Who should be allowed to collect this data, and when does it invade your privacy? What are the ethics of sharing this information? Should your health insurer have access to the fact that you drink an average of half a bottle of vodka a day? Should your employer know that your call to say you're too sick to come in to work came from a ski resort?

Someone with the ability to correlate large amounts of data—whether a business, health care provider, or government agency—might very well deduce more information from a system than was originally intended. Though database designers work hard to put checks in place, clever users who pose multiple questions always pose a threat.

For example, consider an electronic transponder-based toll collection business. This business uses sensors at tollbooths to track transponders and calculate the toll due. At the end of the month, the business sends the driver a bill. Concerned about privacy, the company, while it sells records of transponder numbers, locations, and times so that others can analyze traffic congestion, never associates transponder numbers with customer names and never makes that information available. .

A credit card issuer, however, could buy that information and then correlate charges appearing on a customer's credit card with the cost of tolls incurred by the anonymous transponder number. By matching transponders with customers, the issuer can thus learn which customers are driving well over 15 000 miles per year and are good candidates for a low-interest-rate car loan. Here the correlation has completely bypassed the safeguards that the toll collection company thought it had in place.

And what will a service provider be obligated to do if a government agency demands data about someone's past purchases or travels? In the San Francisco Bay Area, the issue received national attention last year when the regional transportation agency proposed placing transponders in cars to provide data for a traffic management study. Opponents wanted to know what use would be made of data that indicated that a driver was speeding or driving in some way that might be construed as suspicious. A privacy plan to prevent this was quickly developed.

In some cases, the government has legislated the use of location technology in ways that could be construed as a violation of privacy. The Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, enacted in November 2000, makes real-time tire-pressure monitoring compulsory on all cars produced in the United States, with some implementations required as early as this year. TREAD requires a tire-labeling system and associated record keeping that will identify individual tires. Tire companies such as Compagnie Générale des Établissements Michelin (Clermont-Ferrand, France) are already experimenting with embedding small RF transmitters with unique tire identification codes. These sensors can be read with a small handheld or curbside device. It's not much of a stretch to imagine the installation of monitoring systems in parking lots, ramps, and tollbooths to track the location of vehicles.

Generally, in the debate over the use of location technologies, several fundamental questions are being asked. For instance, what is being collected? An E911 system obviously must collect location information, but will that system also collect location information when you are using your phone for other calls?

Then, too, if you choose to use a commercial location service, is that service collecting your personal ID code or merely generic data that an unnamed person was at a specific location at a particular time? What information will officials keep, and how long will they keep it? Can they sell it to other companies? If so, what rights will you have to check information? What rights will you have to challenge the data gathered about you? Issues like these transcend location technology, challenging the meaning of privacy in our increasingly digital world.

In the United States, the FCC is not hurrying to address location-related privacy concerns. In July 2002 it rejected a petition from the wireless industry's Cellular Telecommunications & Internet Association (Washington, D.C.) calling for rules to govern the collection and use of location data generated by wireless communications systems.

The FCC's stated belief is that mandated and public safety services such as E911 will provide benefits exceeding the privacy concerns. It expects many services to be offered with an "opt out" clause allowing individuals to block knowledge of their location either permanently or temporarily. To a certain extent, this is happening with E911, as wireless carriers have discovered that continuous tracking of every user's phone would be too costly. Phones now will block transmission of location information except in the case of an emergency call.

The challenge for carriers will be to offer compelling commercial services with a believable guarantee of privacy and safety. Such services stand a better chance of becoming a "necessary convenience" that is part of day-to-day life.

The challenge for the rest of us will be to ensure that legislation and standards are put in place, making it possible to collect, store, manipulate, distribute, and maintain location information responsibly and preparing us to deal with the nuances and implications of the technology. Few people want Big Brother watching them—whether it's an unregulated wiretap, their favorite store bombarding them in the mall, or non-stop, personalized advertisements on their phone. The issue is not one of technology; it's a question of social maturity.

To Probe Further

The latest on E911 from the U.S. government's perspective is found at the Federal Communications Commission's Web site at http://www.fcc.gov/911/enhanced/.

A list of examples of how radio frequency identification (RF-ID) tags can be used for tracking everything from livestock to beer kegs—along with more mainstream applications, such as tagging airline baggage and hotel room keys—is available at http://www.rf-id.com/apps.htm.

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Electronic Frontier Foundation

Oct. 1, 2003

To: **San Francisco Public Library Commission**

Subject: **Privacy risks of Radio Frequency Identification "tagging" of library books**

The Electronic Frontier Foundation (EFF)[1] respectfully submits these comments and attached document to the San Francisco Public Library (SFPL) Commission with regard to Goal 16.1 of the SFPL Strategic Plan 2003-2006 (Aug. 21, 2003 Final Draft).[2]

Goal 16.1 states that the Library plans to "[i]nitiate implementation" of Radio Frequency Identification (RFID) technology for books and other library materials. Goal 16.1.2 states that the Library plans to "[i]ncorporate funding for implementation as part of the 2004/2005 Library budget process" with "[i]mplementation to begin in 2005/2006."

EFF writes to oppose the Library's plan to implement an RFID system for tracking books and other library materials. As we explain below, RFID technology raises great privacy concerns because insecure RFID tags will permit inventorying of people's possessions and tracking of people via their possessions. These risks are especially great where books and other reading materials are concerned, because both privacy *and* freedom of expression are at stake. Furthermore, we are doubtful that RFID technology will be more cost-effective than existing technologies and practices for check-out, inventory control, and loss prevention.

Libraries have long been very protective of library patron privacy given that surveillance of reading and borrowing records chills the exercise of First Amendment rights. In the famous *Tattered Cover* case, an American Library Association official testified about "the chilling effect that results from disclosure of library circulation records." The Strategic Plan itself notes that the Library "advocate[s] for and support[s] policies and procedures that protect privacy of all library user records." Concern for privacy of reading records has only increased with the enactment of Section 215 of the USA-PATRIOT Act, which allows the government to subpoena reading records while preventing libraries from saying anything about this invasion of patron privacy.

Accordingly, EFF opposes any use of RFID technology unless the planned implementation includes mandatory deactivation ("mandatory kill") of the RFID tags at the point at which the patron leaves the library. In our view, a "mandatory kill" policy is the only measure that would allow RFIDs to be used by the Library internally, while giving the public the necessary time to consider whether and to what extent they want RFIDs to proliferate.

EFF is very concerned that the Library may not have fully considered the privacy and civil liberties implications of implementing RFIDs and may not yet have received information or opinions about RFIDs from sources independent of the RFID industry. Our comments, to be sure, are tentative because we cannot tell from the Strategic Plan exactly what the Library intends or what RFID technologies are being considered. Has the Library already spoken to well-known vendors like Checkpoint or 3M? If so, have any decisions been made?

Indeed, we are concerned that the Library's plan to adopt RFID technology will unintentionally tend to legitimize RFID use in other parts of society. We fully expect that if the Library adopts RFIDs, the

RFID industry will use that fact as part of a public-relations effort to persuade the public that RFIDs are both innocuous and inevitable. *Business Week* has reported, for instance, that "rather than tailoring the technology to address [privacy] concerns," the RFID industry's public-relations firm Fleishman-Hillard "calls for a proactive plan to 'neutralize opposition' and 'mitigate consumer backlash.' The documents advise product spokespeople to emphasize the 'inevitability' of the technology and recommend characterizing RFID as a simple evolution of the bar code, rather than a new technology with futuristic capabilities."[3]

Thus, EFF strongly urges the Commission to reject Goal 16.1 of the Strategic Plan or, at the very least, to postpone adoption of RFID technology pending further study and research into its privacy implications and cost-effectiveness.

Discussion

Imagine a world where your every possession -- your clothes, your books, your car, your cash -- could be tracked with precision: a world where every citizen's purchases, movements, and activities could be monitored by marketers, snoops, stalkers, or even the government, at a level of heretofore-unimaginable granularity. The implications for personal privacy and free speech would be dire. Yet this is the world that will be created by RFID technology, if it is deployed without adequate regard for its social and political implications.

The basic idea behind RFIDs is simple: Tiny tags embedded into products would store information about the product as well as a unique ID number. Radio waves broadcast by RFID readers or scanners would make the RFID tags transmit that information. For businesses, RFIDs represent a "next-generation barcode" solution to the problems of inventory control. An entire warehouse could quickly be scanned to find out how many and what items it contains. RFIDs could also be used as nearly invisible replacements for anti-theft tags.

Unfortunately, RFID technology raises serious privacy problems outside the warehouse and sales floor setting. Because people carry or possess objects, RFIDs also allow people to be tracked via their things. As far as EFF has been able to determine, today's RFIDs are optimized for low-cost, high-rollout production; they are unobtrusive, "dumb," and lack any form of encryption that would prevent unauthorized persons from reading them. Thus, although future RFIDs may permit user control, it is our understanding that RFIDs will lack any information security or privacy safeguards for the foreseeable future.

Accordingly, RFIDs present at least two privacy risks. First, insecure RFIDs permit "inventorying": anyone with a compatible RFID reader can surreptitiously learn what RFID-tagged things you have or wear. Second, insecure RFIDs permit different kinds of "tracking." If an RFID contains information that identifies the person, the person can be tracked via the RFID.

Even if the RFID does not contain personally identifiable information, a person can be tracked through links to other records. If the government had access to a library's borrowing records, it could link a person to the books he or she has borrowed even if the RFID itself does not identify the person. As Beth Givens of the Privacy Rights Clearinghouse has observed,

objects don't necessarily need to be matched with personal identifying information to be used for profiling and location tracking. Imagine a political demonstration in which thousands of people participate. As demonstrators mingle, law enforcement officers with hidden readers capture the unique RFID codes on clothing worn by the participants. Later, when participants perhaps pass through checkpoints, board public transportation, or travel by airplane, the codes can be matched and demonstrators can be detained and/or then identified.[4]

It may be argued that these risks are speculative and hypothetical today. But there is nothing hypothetical about the fact that RFIDs make it easier to track things and people. And if there is one lesson society has learned from computerization, it is that technologies do not stand still. Any socially responsible technology policy must anticipate how technologies spread throughout society and grow in power.

EFF therefore believes that these risks will grow if RFIDs become more common. RFID adoption is being "pushed" from many directions. Governments are using or thinking about using RFIDs. The European Union is planning to use RFIDs in its currency, with obvious implications for financial privacy. The U.S. Postal Service is considering the use of RFIDs for "Intelligent Mail." This "I-Mail" initiative contemplates attaching to every piece of mail a unique, machine-readable identifier. Such identification would not only include postage amount and basic routing information, but the "digital signature" of the sender, including "name, address, or [even] biometric data" to convey the " 'who, when, and where' of the mailer." The implications for anonymous speech through the mails are obvious, too.

When today's consumers learn about plans to deploy RFIDs, they think about society will be like when RFIDs are widespread, and they make extremely reasonable assumptions about what both business and government will do with this power to track. It should therefore be no surprise that businesses like Wal-Mart, Gillette, and Benetton encountered significant public outcry when they announced plans to use RFIDs outside of the internal supply chain.

In fact, the RFID industry is well aware of these consumer privacy concerns; an industry document summarizing the results of focus-group research stated that "Virtually all groups spontaneously said they wanted a choice and that 'the chip should be able to be killed.'"[5]

Here are some consumer concerns, as described by RFID industry research:

1. Will individuals benefit?

"The store will benefit more than the consumer."

Study comment: "there are currently no clear benefits by which to balance even the mildest negative, so any negative press coverage, no matter how mild would shift the neutral to a negative."

2. Will RFIDs be misused?

"I am playing cynic for a moment, I can guarantee that they will be able to read through steel."

"I don't think it will be restricted to products... it will be linked to personal information."

"The limited range? I reject that promise... In the future, the technology will develop. It will leave you naked."

Study comment: "Their biggest concern is abuse."

3. Will individuals be tracked?

"I could be tracked by the clothes I'm wearing."

Study comment: "Clothing was a major inflamer. Consumers assumed that tags would be embedded into clothing . . . . Tagging their clothes was tantamount to tagging them personally. This was by far the greatest concern expressed in groups."

4. Will individuals be inventoried?

"I'd feel naked if people know what I'm wearing."

"Companies or the government will be able to monitor everything I buy and spy on me."

"Someone could see everything I buy by reading my trash."

5. "Personal security"

"muggers could know what is in my shopping bag or if I'm wearing a Rolex."

"the technology will improve to allow people to read through walls."

EFF reiterates that these consumer concerns are not limited to the here and now. When consumers think about RFIDs, they think about what will happen to their privacy and security if RFIDs and RFID readers become commonplace. The general public is acutely aware of how rapidly technology improves, and they know that privacy-invasive technologies often start small but usually spread more quickly than "experts" predict. The time to think about these privacy concerns is now, before RFIDs become part of the fabric of everyday life.

Contrary to popular belief, RFID technology is still in its infancy in consumer-facing applications. As a national newspaper recently reported, "Wal-Mart Stores Inc. and Gillette Co. abruptly yanked a pilot program for the technology" and quoted a Wal-Mart spokesperson as saying that it will be "many years" before tagging individual items is practical or profitable.[6] The Public Library Association of the American Library Association reports that "RFID systems are still relatively new in libraries" and that "[f]ewer than 50 had been installed as of the third quarter of 2001," with only two sites labeling more than one million items each.[7]

Finally, we are doubtful that it is worth it for the Library to implement RFIDs as a cost-saving measure given these privacy concerns. How much will this cost? Does the Library know how its contemplated RFID system will work? How much will RFIDs really facilitate users' self-service check-out of library materials as compared to existing barcodes? How much will RFIDs really improve inventory control or loss prevention over existing methods? How will they prevent loss? Has the Library been getting its information from RFID industry representatives, or has it consulted independent technologists? Has the Library performed a technology assessment? Is there any evidence that RFIDs will provide a net marginal benefit over less privacy-invasive technologies? The public deserves answers to these and other questions before, not after, the Library decides to use RFIDs.

Conclusion

EFF's general position on RFIDs is simple. Because they pose inventorying and tracking risks and lack meaningful information security, current RFID technology, if it is to be used on consumer-facing products, must be permanently disabled or "killed" at the point of sale. We also urge industry to make "kill" technology cheaply and readily available to consumers, so that individuals can be sure that RFIDs truly have been disabled.

Accordingly, EFF urges the Commission to reject Goal 16.1 of the Strategic Plan or, at the very least, to postpone adoption of RFIDs pending further study and research into its privacy implications and cost-effectiveness.

Respectfully submitted,

Lee Tien

Senior Staff Attorney

Electronic Frontier Foundation

Addendum

EFF has been informed that the Library is amending the language of the Strategic Plan to reflect that the Library has not yet decided to implement an RFID system. While this is good news, it does not answer the concerns and questions we have set forth above. EFF hopes that the Library intends to open the matter of RFID implementation to public discussion, and looks forward to participating in any such discussion.

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[1] EFF is a non-profit, civil liberties group based in San Francisco with more than 10,000 members. Our website is at <http://www.eff.org>.

[2] EFF does not express any opinion about other parts of the Strategic Plan.

[3] Jane Black, "Playing Tag with Shoppers' Anonymity," *Business Week Online* (July 21, 2003). http://www.businessweek.com/technology/content/jul2003/tc20030721_8408_tc073.htm

[4] Beth Givens, Privacy Rights Clearinghouse, *RFID and the Public Policy Void* (Aug. 18, 2003) (presented to Joint Committee on Preparing California for the 21st Century, California Legislature, Sen. Debra Bowen, Chair), available at http://www.privacyrights.org/ar/RFIDHearing.htm (see enclosure).

[5] Auto-ID Centre, *Executive Briefing, Public Policy: Understanding Public Opinion* 6 (Feb. 1, 2003), <http://cryptome.org/rfid/cam-autoid-eb002.pdf>.

[6] James Covert and Christina Cheddar Bork, "Tracking Chips Stir Privacy Concerns," *Wall Street Journal* pg. 1 (Jul. 29, 2003, eastern edition).

[7] http://www.ala.org/Content/NavigationMenu/PLA/Publications_and_Reports/Tech_Notes/RFID_Technc

Electronic Frontier Foundation

Position Statement on the Use of RFID on Consumer Products

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Position Statement
on the Use of RFID on Consumer Products

November 14, 2003
Available at www.spychips.com and www.privacyrights.org

Issued by:

Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN)

Privacy Rights Clearinghouse

American Civil Liberties Union (ACLU)
Electronic Frontier Foundation (EFF)
Electronic Privacy Information Center (EPIC)
Junkbusters
Meyda Online
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National Association of Consumer Agency Associates (NACAA)
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INTRODUCTION

Radio Frequency Identification (RFID) is an item-tagging technology with profound societal implications. Used improperly, RFID has the potential to jeopardize consumer privacy, reduce or eliminate purchasing anonymity, and threaten civil liberties.

As organizations and individuals committed to the protection of privacy and civil liberties, we have ome together to issue this statement on the deployment of RFID in the consumer environment. In the llowing pages, we describe the technology and its uses, define the risks, and discuss potential public policy approaches to mitigate the problems we raise.

RFID tags are tiny computer chips connected to miniature antennae that can be affixed to physical objects. In the most commonly touted applications of RFID, the microchip contains an Electronic Product Code (EPC) with sufficient capacity to provide unique identifiers for all items produced worldwide. When an RFID reader emits a radio signal, tags in the vicinity respond by transmitting their stored data to the reader. With passive (battery-less) RFID tags, read-range can vary from less than an inch to 20-30 feet, while active (self-powered) tags can have a much longer read range. Typically, the data is sent to a distributed computing system involved in, perhaps, supply chain management or inventory control.

THREATS TO PRIVACY AND CIVIL LIBERTIES

While there are beneficial uses of RFID, some attributes of the technology could be deployed in ways that threaten privacy and civil liberties:

- **Hidden placement of tags.** RFID tags can be embedded into/onto objects and documents without the knowledge of the individual who obtains those items. As radio waves travel easily and silently through fabric, plastic, and other materials, it is possible to read RFID tags sewn into clothing or affixed to objects contained in purses, shopping bags, suitcases, and more.
- **Unique identifiers for all objects worldwide.** The Electronic Product Code potentially enables every object on earth to have its own unique ID. The use of unique ID numbers could lead to the creation of a global item registration system in which every physical object is identified and linked to its purchaser or owner at the point of sale or transfer.
- **Massive data aggregation.** RFID deployment requires the creation of massive databases containing unique tag data. These records could be linked with personal identifying data, especially as computer memory and processing capacities expand.
- **Hidden readers.** Tags can be read from a distance, not restricted to line of sight, by readers that can be incorporated invisibly into nearly any environment where human beings or items congregate. RFID readers have already been experimentally embedded into floor tiles, woven into carpeting and floor mats, hidden in doorways, and seamlessly incorporated into retail shelving and counters, making it virtually impossible for a consumer to know when or if he or she was being "scanned."
- **Individual tracking and profiling.** If personal identity were linked with unique RFID tag numbers, individuals could be profiled and tracked without their knowledge or consent. For example, a tag embedded in a shoe could serve as a de facto identifier for the person wearing it. Even if item-level information remains generic, identifying items people wear or carry could associate them with, for example, particular events like political rallies.

FRAMEWORK OF RFID RIGHTS AND RESPONSIBILITIES

This framework respects businesses' interest in tracking products in the supply chain, but emphasizes individuals' rights to not be tracked within stores and after products are purchased. To mitigate the potential harmful consequences of RFID to individuals and to society, we recommend a three-part framework. First, RFID must undergo a formal technology assessment, and RFID tags should not be affixed to individual consumer products until such assessment takes place. Second, RFID implementation must be guided by Principles of Fair Information Practice. Third, certain uses of RFID should be flatly prohibited.

Technology assessment. RFID must be subject to a formal technology assessment process, sponsored by a neutral entity, perhaps similar to the model established by the now defunct Congressional Office of Technology Assessment. The process must be multi-disciplinary, involving all stakeholders, including consumers.

Principles of Fair Information Practice. RFID technology and its implementation must be guided by strong principles of fair information practices (FIPs). The eight-part Privacy Guidelines of the Organisation for Economic Co-operation and Development (OECD) provides a useful model (www.oecd.org). We agree that the following minimum guidelines, based in part on these principles, must be adhered to while the larger assessment of RFID's societal implications takes place:

- **Openness, or transparency.** RFID users must make public their policies and practices involving the use and maintenance of RFID systems, and there should be no secret databases. Individuals have a right to know when products or items in the retail environment contain RFID tags or readers. They also have the right to know the technical specifications of those devices. Labeling must be clearly displayed and easily understood. Any tag reading that occurs in the retail environment must be transparent to all parties. There should be no tag-reading in secret.
- **Purpose specification.** RFID users must give notice of the purposes for which tags and readers are used.
- **Collection limitation.** The collection of information should be limited to that which is necessary for the purpose at hand.
- **Accountability.** RFID users are responsible for implementation of this technology and the associated data. RFID users should be legally responsible for complying with the principles. An accountability mechanism must be established. There must be entities in both industry and government to whom individuals can complain when these provisions have been violated
- **Security Safeguards.** There must be security and integrity in transmission, databases, and system access. These should be verified by outside, third-party, publicly disclosed assessment.

RFID Practices that Should be Flatly Prohibited:

- Merchants must be prohibited from forcing or coercing customers into accepting live or dormant RFID tags in the products they buy.
- There should be no prohibition on individuals to detect RFID tags and readers and disable tags on items in their possession.
- RFID must not be used to track individuals absent informed and written consent of the data subject. Human tracking is inappropriate, either directly or indirectly, through clothing, consumer goods, or other items.
- RFID should never be employed in a fashion to eliminate or reduce anonymity. For instance, RFID should not be incorporated into currency.

ACCEPTABLE USES OF RFID

We have identified several examples of "acceptable" uses of RFID in which consumer-citizens are not subjected to "live" RFID tags and their attendant risks.

- **Tracking of pharmaceuticals** from the point of manufacture to the point of dispensing. RFID tags could help insure that these critical goods are not counterfeit, that they are handled properly, and that they are dispensed appropriately. RFID tags contained on or in the pharmaceutical containers should be physically removed or permanently disabled before being sold to consumers.
- **Tracking of manufactured goods** from the point of manufacture to the location where they will be shelved for sale. RFID tags could help insure that products are not lost or stolen as they move through the supply chain. The tags could also assure the goods are handled appropriately. Tags should be confined to the outside of product packaging (not embedded in the packaging) and be permanently destroyed before consumers interact with them in the store.
- **Detection of items containing toxic substances** when they are delivered to the landfill. For example, when a personal computer is brought to the landfill, a short-range RFID tag could

communicate toxic content to a reader at the landfill. It is important to underscore that uses such as the landfill example do not require -- and should not entail -- item-level unique identifiers. The RFID tag would, rather, emit a generic recycling or waste disposal message.

CONCLUSIONS

We are requesting manufacturers and retailers to agree to a voluntary moratorium on the item-level RFID tagging of consumer items until a formal technology assessment process involving all stakeholders, including consumers, can take place. Further, the development of this technology must be guided by a strong set of Principles of Fair Information Practice, ensuring that meaningful consumer control is built into the implementation of RFID. Finally, some uses of RFID technology are inappropriate in a free society, and should be flatly prohibited. Society should not wait for a crisis involving RFID before exerting oversight.

Although not examined in this position paper, we must also grapple with the civil liberties implications of governmental adoption of RFID. The Department of Defense has issued an RFID mandate to its suppliers, schools and libraries in the have begun implementing RFID, the EU and the Japanese government have considered the use of RFID in currency, and British law enforcement has expressed an interest in using RFID as an investigative tool. As an open democratic society, we must adopt a strong policy framework based on Principles of Fair Information Practice to guide governmental implementation of RFID.

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Attachment 1

November 14, 2003

Limitations of RFID Technology : Myths Debunked

The following technological limitations have been proposed as reasons why consumers should not be concerned about RFID deployment at this time. We address each perceived limitation in turn, and explain why in themselves, these limitations cannot be relied upon as adequate consumer protection from the risks outlined above.

1. Read-range distances are not sufficient to allow for consumer surveillance.

RFID tags have varying read ranges depending on their antenna size, transmission frequency, and whether they are passive or active. Some passive RFID tags have read ranges of less than one inch. Other RFID tags can be read at distances of 20 feet or more. Active RFID tags theoretically have very ong ranges. Currently, most RFID tags envisioned for consumer products are passive with read ranges of under 5 feet.

Contrary to some assertions, tags with shorter read ranges are not necessarily less effective for tracking human beings or items associated with them. In fact, in some cases a shorter read range can be more powerful. For example, if there were an interest in tracking individuals through their shoes as they come within range of a floor reader, a two-inch read range would be preferable to a two-foot read range. Such a short range would help minimize interference with other tags in the vicinity, and help assure the capture of only the pertinent tag positioned directly on the reader.

2. Reader devices not prevalent enough to enable seamless human tracking.

The developers of RFID technology envision a world where RFID readers form a "pervasive global network" It does not take a ubiquitous reader network to track objects or the people associated with them. For example, automobiles traveling up and down Interstate 95 can be tracked without placing RFID readers every few feet. They need only be positioned at the entrance and exit ramps. Similarly, to track an individual's whereabouts in a given town, it is not necessary to position a reader device every ten feet in that town, as long as readers are present at strategic locations such as building entrances.

3. Limited information contained on tags.

Some RFID proponents defend the technology by pointing out that the tags associated with most onsumer products will contain only a serial number. However, the number can actually be used as a ference number that corresponds to information contained on one or more Internet-connected databases. This means that the data associated with that number is theoretically unlimited, and can be augmented as new information is collected.

For example, when a consumer purchases a product with an EPC-compliant RFID tag, information about the consumer who purchased it could be added to the database automatically. Additional information could be logged in the file as the consumer goes about her business: "Entered the Atlanta courthouse at 12:32 PM," "At Mobil Gas Station at 2:14 PM," etc. Such data could be accessed by anyone with access to such a database, whether authorized or not.

4. Passive tags cannot be tracked by satellite.

The passive RFID tags envisioned for most consumer products do not have their own power, meaning they must be activated and queried by nearby reader devices. Thus, by themselves, passive tags do not have the ability to communicate via satellites.

However, the information contained on passive RFID tags could be picked up by ambient reader devices which in turn transmit their presence and location to satellites. Such technology has already been used to track the real-time location of products being shipped on moving vehicles through the North American supply chain.

In addition, active RFID tags with their own power source can be enabled with direct satellite transmitting capability. At the present time such tags are far too expensive to be used on most consumer products, but this use is not inconceivable as technology advances and prices fall.

5. High cost of tags make them prohibitive for wide-scale deployment.

RFID developers point to the "high cost" of RFID tags as a way to assuage consumer fears about the power of such tags. However, as technology improves and prices fall, we predict that more and more consumer products will carry tags and that those tags will become smaller and more sophisticated. We predict that the trend will follow the trends of other technical products like computers and calculators.

RFID Position Paper

Attachment 2

A Critique of Proposed Industry Solutions

The RFID industry has suggested a variety of solutions to address the dangers posed by RFID tagging of consumer products. Among them are killing the tags at point of sale, the use of "blocker tags," and the "closed system." We examine each strategy in turn.

KILLING TAGS AT POINT OF SALE

Some have proposed that the RFID tag problem could be solved by killing the tags at the point of sale, rendering them inoperable. There are several reasons why we do not believe this approach alone and without other protections will adequately protect consumer privacy:

Killing tags after purchase does not address in-store tracking of consumers.

To date, nearly all consumer privacy invasion associated with RFID tagging of consumer products has occurred within the retail environment, long before consumers reached the checkout counter where chips could be killed. Examples include:

- Close-up photographs were taken of consumers as they picked up RFID-tagged packages of Gillette razor products from store shelves equipped with Auto-ID Center "smart shelf" technology.[1]
- A video camera trained on a Wal-Mart cosmetics shelf in Oklahoma enabled distant Procter and Gamble executives to observe unknowing customers as they interacted with RFID-tagged lipsticks.[2]
- Plans are underway to tag books and magazines with RFID devices to allow detailed in-store observation of people browsing reading materials[3]. This potential was demonstrated recently at the Tokyo International Book Fair 2003. According to Japan's *Nikkei Electronic News*, "By placing tag readers on the shelves of bookstores, the new system allows booksellers to gain information such as the range of books a shopper has browsed, how many times a particular title was picked up and even the length of time spent flipping through each book."

We recognize the need for stores to control shoplifting and make general assessments to enhance operations. However, monitoring and recording the detailed behaviors of consumers without their consent, even if only within the store, violates Principles of Fair Information Practice.

Tags can appear to be "killed" when they are really "asleep" and can be reactivated

Some RFID tags have a "dormant" or "sleep" state that could be set, making it appear to the average consumer that the tag had been killed. It would be possible for retailers and others to claim to have killed a tag when in reality they had simply rendered it dormant. It would be possible to later reactivate and read such a "dormant" tag.

The tag killing option could be easily halted by government directive.

It would take very little for a security threat or a change in governmental policies to remove the kill-tag option. If RFID tags are allowed to become ubiquitous in consumer products, removing the kill option could enable the instant creation of a surveillance society.

Retailers might offer incentives or disincentives to consumers to encourage them to leave tags active.

Consumers wishing to kill tags could be required to perform additional steps or undergo burdensome procedures, such as waiting in line for a "killer kiosk"[4] and then being required to kill the tags themselves. Consumers who choose to kill the tags might not enjoy the same discounts or benefits as other consumers, or might not be allowed the same return policies. In many areas of privacy law, this retailer incentive is recognized, and there are legislative prohibitions against inducing the consumer to waive their privacy rights.[5]

The creation of two classes of consumers.

If killing tags requires conscious effort on the part of consumers, many will fail to do so out of fear, ignorance, or lack of time. Many will choose *not* to kill the tags if doing so is inconvenient. (The current "killer kiosk" requires loading one item at a time, a lengthy and time consuming process.) This would create two classes of consumers: those who "care enough" to kill the RFID tags in their products and those who don't. Being a member of either class could have negative ramifications.

BLOCKER TAGS

RFID blocker tags are electronic devices that should theoretically disrupt the transmission of all or select information contained on RFID tags. The proposed blocker tag might be embedded in a shopping bag, purse, or watch that is carried or worn near tags with information consumers want blocked.[6]

According to our understanding, the blocker tag does not yet exist. Until a blocker tag is built and tested, there is no way to know how effective it will be and whether it can be technically defeated.

The blocker tag might encourage the proliferation of RFID devices by giving consumers a false sense of security. While the proposed invention is an ingenious idea, it's one that could be banned or be underutilized if consumers become complacent. It's also possible that such an electronic device could be technically defeated either purposefully or because it stops functioning naturally.

The blocker tag could be banned by government directive or store policy.

Consumers could lose the right to use blocker tag devices if the government deems that knowing what people are wearing or carrying is necessary for national security. They might disallow the devices altogether or name selective spaces in which blocker tags would be disallowed. It is not inconceivable to imagine a ban on such devices in airports or public buildings, for example.

Retail stores might ban blocker tags if they believe the tags might be used to circumvent security measures or if they believe knowing details about consumers is valuable in their marketing efforts.

Once RFID tags and readers are ubiquitous in the environment, a full or partial ban on a privacy device like the blocker tag would leave consumers exposed and vulnerable to privacy invasion.

A blocker tag shifts the burden of protecting privacy away from the manufacturers and retailers and places it on the shoulders of consumers. In addition, busy consumers might forget to carry blocker devices or forget to implement them, especially if additional steps are required to make them effective.

Fails to protect consumers once products are separated from the blocker tag.

Blocker tags theoretically work only when they are close to the items they are designed to "conceal" from RFID reader devices. Once items are out of the range of the blocking device, consumers would be exposed and vulnerable to privacy invasion. For example, a consumer might buy a sweater and feel that the information on the embedded RFID tag is unexposed because she is carrying it home in a bag impregnated with a blocker device. However, once she removes that sweater from the bag and wears it in range of a reader device, information from that tag could be gleaned.

The creation of two classes of consumers.

Like the kill tag feature, blocker tags will also likely create two classes of consumers, those who block tags and those who do not.

CLOSED SYSTEM

Industry proponents argue that when RFID applications are confined to closed systems, the data is only accessible to those within the system and those with a government mandate (perhaps via legislation such as the Communications Access to Law Enforcement Act (CALEA)). Therefore they argue, society-wide profiling and tracking are not likely. An example of a current closed application is RFID in libraries. *The Grapes of Wrath* in Library X has a different code than the same book in Library Y.

Whereas today RFID applications are confined to closed systems, there will be great incentives to standardize product level tagging. Publishers, for example, may someday ship books to libraries and bookstores with writable tags. Each copy of *The Grapes of Wrath* will contain a portion of its EPC code that is the same as every other copy. The library will be able to customize the remainder of the code to suit its own inventory control purposes.

Even if closed systems remain closed, their lack of transparency makes them troubling from a privacy perspective. Because details about closed systems might not be readily available, consumers could have difficulty obtaining the information necessary to assess privacy risks and protect themselves.

We appreciate that industry proponents are making an effort to address consumer privacy and civil liberties concerns associated with RFID technology. However, while we believe the proposed solutions are offered in the proper spirit, they provide inadequate protection. Until appropriate solutions are developed and agreed upon, we believe it is improper to subject consumers to the dangers of RFID technology through item-level consumer product tagging.

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[1] Alorie Gilbert, "Cutting edge 'smart shelf' test ends." CNET News, August 22, 2003. Available online at http://news.com.com/2100-1008_3-5067253.html
[2] Howard Wolinsky, "P&G, Wal-Mart store did secret test of RFID." The Chicago Sun Times, November 10, 2003. Available online at http://www.suntimes.com/output/lifestyles/cst-nws-spy09.html
[3] Winston Chai, "Tags track Japanese shoppers." CNET News, May 8, 2003. Available online at http://news.zdnet.co.uk/business/0,39020645,2134438,00.htm
[4] NCR prototype kiosk kills RFID tags." RFID Journal, September 25, 2003. Available online at http://www.rfidjournal.com/article/articleview/585/1/1/
[5] See e.g., California SB 27, codified at 1798.84 (a).
[6] RFID blocker tags developed." Silicon.com, August 28, 2003. Available online at http://www.silicon.com/software/applications/0,39024653,10005771,00.htm

RFID Implementation in Libraries: Presentations to ALA Intellectual Freedom Committee

American Library Association

January 10, 2004, at ALA Mid-Winter, San Diego, CA

- Beth Givens, Director, Privacy Rights Clearinghouse
- Lee Tien, Senior Staff Attorney, Electronic Frontier Foundation

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RFID Implementation in Libraries: Some Recommendations for "Best Practices"

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General Issues:

- The selection of a system to automate library functions such as a circulation or an integrated library system (ILS) launches the library into a *long-term commitment* to that system. If a library selects an RFID-based system, it is likely to retain that system for a long time, primarily because of its high cost as well as the time-consuming structural changes that the library must engage in to successfully use the new system.

- Has the library community examined where the RFID technology is going and how it is expected to evolve? Even though privacy and civil liberties impacts might not be of concern now because RFID systems in libraries are essentially "closed" systems, that may not be the situation forever. For example, the publishing industry is exploring the use of RFID to tag books.

- The library community must monitor and shape the direction vendors and jobbers are taking with RFID. It is important for the library community to resist efforts that move RFID from its present proprietary ("closed") status to that of the RFID standards in the marketplace (the EPC standard developed by MIT's AutoID Center) – or that incorporate the use of marketplace tags with library-specific tags, a situation that could occur if the publishing industry adopts RFID. Also, it is especially critical for the library community to require effective, auditable security of RFID systems.

- We recommend that the library community conduct a comprehensive technology assessment of RFID as soon as possible to enable librarians to make the best possible decisions involving the implementation of this technology. Such a risk-benefit analysis would include an investigation of the potential privacy and civil liberties implications and the best methods to mitigate these harms.

- The library community is a leader in protecting intellectual freedom and user privacy. Libraries have an opportunity to be societal leaders and a "model industry" in the way in which they adopt RFID-based circulation and ILS systems.

Best Practices, based primarily on Principles of Fair Information Practices (resources at end):

- **Privacy policy**. If the library has not adopted a privacy policy, it should develop one that encompasses its implementation of RFID.
- **Notice / Openness**. The library must make public its policies and practices involving the use and maintenance of RFID systems, encompassing tags, readers, and the associated database(s).
  - Library users have a right to know that items contain RFID tags and generally where readers are located.
  - They have the right to know the technical specifications of those devices.
  - Labeling must be clearly displayed and easily understood.
  - Any tag reading that occurs in the library environment must be transparent to all parties. There should be no tag-reading in secret.
- **Purpose specification.** Library users must be given notice of the purposes for which tags and readers are used.
- **Collection limitation.** The collection of information should be limited to that which is necessary for the stated purpose. There should be no personal data encoded in RFID tags.
- **Security safeguards.** There must be auditable security and integrity in transmission, databases, and system access, including the use of encryption.
- **Accountability**. The library must inform its users who they can contact for questions and complaints.

Resources

AutoID Center, "Guiding Principles [for RFID]" posted on the Alien Technology web site, www.alientechnology.com/product/rfid_privacy.html (2003).

California Senate, Energy and Utilities Subcommittee hearing, Agenda and Testimony, "RFID Technology —Where Is It Headed?," Nov. 20, 2003. www.senate.ca.gov/ftp/SEN/COMMITTEE/STANDING/ENERGY/_home/11-20-03agenda.htm

Vinod Chachra and Daniel McPherson, "Personal Privacy and Use of RFID Technology in Libraries," www.vtls.com/documents/privacy.pdf. (Oct. 2003).

David Dorman, "Technically Speaking: RFID Poses No Problem for Patron Privacy," *American Libraries* (Dec. 2003).

James Lichtenberg, "Industry Exploring Viability of RFID," *Publishers Weekly* (Nov. 17, 2003).

Simson Garfinkel, RFID privacy web log, www.rfidprivacy.org (Established 2003)

Simson Garfinkel, "An RFID Bill of Rights," *MIT Technology Review,* www.technologyreview.com/articles/print_version/garfinkel1002.asp (Oct. 2002).

Beth Givens, "A Review of the Fair Information Principles," Privacy Rights Clearinghouse, www.privacyrights.org/ar/fairinfo.htm (1997).

Beth Givens, "RFID and the Public Policy Void," testimony presented at Joint Committee on Preparing California for the 21st Century, California Legislature, Aug. 18, 2003, www.privacyrights.org/ar/RFIDHearing.htm.

"Position Statement on the Use of RFID in Consumer Products," endorsed by 40 consumer, privacy, and civil liberties organizations, www.privacyrights.org/ar/RFIDposition.htm (Nov. 20, 2003).

"The RFID Right to Know Act of 2003," proposed by CASPIAN's Katherine Albrecht and developed by Zoe Davidson of Boston University Legislative Clinic. www.nocards.org/rfid/rfidbill.shtml (2003).

Karen Schneider, "RFID and Libraries: Both Sides of the Chip," testimony presented at Committee on Energy and Utilities, California Senate, Nov. 20, 2003, www.senate.ca.gov/ftp/SEN/COMMITTEE/STANDING/ENERGY/_home/11-20-03karen.pdf .

"Should Libraries Play Tag with RFIDs? Librarians Jackie Griffin and Karen Schneider discuss the benefits and problems of using this hot new technology," *American Libraries* (Dec. 2003).

Lee Tien, "Privacy Risks of Radio Frequency Identification 'Tagging' of Library Books," testimony first presented to San Francisco Public Library Oct. 1, 2003, and contributed to Committee on Energy and Utilities, California Senate, Nov. 20, 2003, www.senate.ca.gov/ftp/SEN/COMMITTEE/STANDING/ENERGY/_home/11-20-03library.htm.

RFID and Libraries: EFF Talking Points for ALA IFC

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January 10, 2004

1. While "closed" or "proprietary" library RFID systems may provide some privacy protection for library patrons today, this is not a viable long-term answer to the civil liberties risks. Closed systems rely fundamentally on "security through obscurity."

2. Several forces seem poised to erode closed systems.

    a. Book publishers will eventually use their own RFIDs. It likely won't happen for a few years, but the Book Industry Study Group is looking at RFIDs. See AAP Memo ("RFID may eventually become widely used for identification of products in the book industry"); Japanese Book Tracking Trial: <http://news.zdnet.co.uk/business/0,39020645,2134438,00.htm> ("...allows booksellers to gain information such as the range of books a shopper has browsed, how many times a particular title was picked up and even the length of time spent flipping through each book"). To the extent that major retailers like Wal-Mart sell books and want suppliers to use RFIDs, the trend will gain momentum. An individual library would have a strong cost incentive to use whatever RFID system used by book publishers.

    b. Many libraries already are parts of larger library systems or library consortia, and it should be expected that RFIDs will be interoperable within their own systems or consortia.

    c. Today's library RFIDs mainly operate in the high-frequency (HF) 13.56 MHz band, the most widely used of the RFID HF bands (UHF/868-915 MHz and microwave/2.45 GHz or 5.8 Ghz) because it's the global standard frequency for contactless smart cards or proximity cards. HF-band RFIDs have longer read ranges than low-frequency RFIDs, but don't need a power source. As a result, we should expect RFID readers/sensors for this frequency band to be very common, which will increase the likelihood that non-library RFID readers will be able to capture RFID data from library RFID tags.

    d. Exploiting mass-production scale economies is a key major business goal of the RFID industry. It's unclear how long libraries will have market pull with RFID system vendors, because the industry needs to standardize and consolidate on a discrete set of options in order to sell as many RFID tags as possible for as many applications as possible globally. It's likely that the RFID industry and manufacturers, resellers, system integrators and government agencies will cooperate even more as the industry matures.

3. Libraries are one of the few government entities now using RFIDs, along with schools and the Defense Department. Unlike commercial RFIDs, government RFIDs (like library RFIDs) will be developed with persistence in mind: ID cards are an obvious example. Because the "kill" option won't be available – we expect it will be unlawful to tamper with the RFID on a driver's license or passport -- the privacy/civil liberties issues are more serious. EFF urges libraries to think of themselves as part of the government and to think about the need for a deliberate policy process for government use of RFIDs, at least at the state and local level.

4. If libraries wish to influence RFID use and development toward privacy and security, the time is now. EFF urges libraries to act collectively as soon as possible to protect their own and their patrons' interests, as well as to set an example for society.

Privacy Rights Clearinghouse

New Postings & Alerts	Fact Sheets	Páginas Informativas	Speeches & Testimony
Identity Theft	Financial Privacy	Internet Privacy	Medical Records	Background Checks & Workplace
Telephone & Telecommunications	Public & Government Records	Consumers Speak Out	Privacy Links
About Us
Contact Us	Join our Mailing List	Support Us	Send Your Inquiry	Privacy Policy	Search Our Site	Home

RFID and Libraries: Both Sides of the Chip

Karen G. Schneider
Director, Librarians' Index to the Internet, http://lii.org
Chair, California Library Association Intellectual Freedom Committee

I. RFID in Libraries: Necessary, Sensible, and Humane

RFID is an inevitable technology in libraries, both for financial and humane reasons. In this country, library usage has risen significantly in the past decade (and since March 2001 has soared, perhaps in response to the economy[1]), library collections have grown significantly, labor costs of staffing circulation desks have soared, and a highly feminized workforce spends all day in repetitive tasks required by older technologies such as paper barcodes.

Libraries have several activities that can benefit from RFID. These include:

- Circulation: checking out books and other items, and checking them back in again
- Inventory management: ensuring items are properly located in the collection
- Book processing: adding items to the library's collection

By making books and other library items "smart," RFID offers the following improvements to library services:

1. **Reduction in workplace injuries.** Workplace injuries caused by the repetitive motions related to flipping books and angling books under barcode readers cost libraries millions of dollars every year, and lead to pain, limited physical range, and other problems familiar to a feminized workforce.

2. **Facilitating self-check.** Self-check, or checking out your own books, is much easier with RFID technology because the book does not have to be positioned or angled under a barcode scanner, but can be simply moved within range of an RFID reader. Self-check saves money directly, by reducing labor costs for circulation (check-out) activities, and indirectly, by reducing opportunities for repetitive stress injuries. Furthermore, self-check is inherently more private than requiring another human to handle and inspect the items you wish to check out of the library.

3. **Streamlined inventory management.** Libraries spend a lot of money ensuring books are where they need to be. Books with barcodes require humans to physically remove and handle every item to ensure it is in the correct location. RFID offers the ability to analyze and correct library inventories without handling the items.

4. **Streamlined in-processing.** Acquisitions—the library activity associated with purchasing books and adding them to the collection—can be streamlined with RFID.

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[1] See Library usage up in wake of recession, American Library Association, April 2002, http://www.ala.org/Content/ContentGroups/Press_Releases2/Library_usage_up_in_wake_of_recession_.htm

All four of these benefits lead to improved public service, which is the bottom line of librarianship. Libraries rarely enjoy luxurious budgets, and it is the goal of every administrator to redirect as many funds as possible toward better library services—more books, more story hours, and longer hours of service for everyone.

II. RFID in Libraries: Cause for Concern

Despite the clear advantages of RFID in libraries, as a library administrator and a former supervisor of a library's circulation department, I must raise a cautionary note.

The fiscal and humane arguments for moving away from barcode technology in libraries cannot obscure the fact that libraries began adopting RFID several years ago without serious preliminary enquiries into the technology, either *in situ* or as part of a larger universe in which libraries are but one of many public and private institutions adopting new technologies.

To many free-speech and privacy advocates, reassurances that profession-wide, RFID in libraries is being implemented in a privacy-safe manner ring somewhat hollow. This skepticism is not without basis. Too often librarians' rationalizations are facile or vendor-supplied, or simply illogical, and in some cases raise more concerns than they resolve, particularly since the library profession, as a whole, has yet to seriously discuss RFID.

These rationalizations can be summarized as follows:

1. RFID tags are expensive; therefore, RFID will not become pervasive in society.
2. RFID tags for library items would be disabled after check-out.
3. Libraries only store barcodes on their tags.
4. Library databases are highly secure.
5. As implemented for libraries, RFID has limited range.
6. It's too hard to use this information anyway.
7. Library RFID operates on a different frequency (or, library RFID is unique, and does not follow the "industry standard").
8. Librarians are aware of the privacy issues related to RFID and consider these issues when implementing RFID.
9. Libraries are a unique, isolated institution in society. Whatever anyone else does with RFID has nothing to do with us.
10. Libraries can never be forced to adopt a specific RFID standard or implement RFID in a specific manner.

Tellingly, you will never find librarians arguing that other institutions have no vested interest in learning about the reading habits of library users. Librarians have spent over fifty years developing the theory and practices described in our Library Bill of Rights[2] and outlined at length in the Intellectual Freedom Manual of the American Library Association[3], precisely because far too many government and private institutions have expressed far too much interest in the reading habits of library users, as is evident from the FBI's Library Awareness Program of the 1970s and today's USA PATRIOT Act.

Point by point, here are some concerns, and possible responses, to the nine rationalizations listed above:

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[2] See American Library Association, Office of Intellectual Freedom, http://www.ala.org/alaorg/oif/

[3] ibid.

1. **The cost of the chip is a red herring.** Obviously, as use increases, the cost will decrease, and vice versa. Vendors and librarians are both counting on that. Library tags will most likely always be more expensive than retail tags, as tags for library materials are expected to be reused and to last the life of the item. However, relying on the cost of RFID in general as a natural limitation on implementation of this technology society-wide is illogical and already disproved by the many recent stories detailing rapid and widespread adoption of RFID in the retail and government worlds.

2. **Tags for library books must stay enabled, or "live," to be useful.** Any librarian actually working with this technology will volunteer this information immediately. Books need to be able to be live-tagged so libraries know whether a book has been checked out in the first place.

3. **Libraries *should* only store barcode numbers on these tags, but we have yet to develop best practices profession-wide.** At least one library in California has acknowledged that they store patron information on RFID tags, and who knows but a national privacy audit might reveal others. Note that to support our commitment to our users, libraries have developed databases that do not store information about our users' reading habits; this is standard professional practice encouraged by policy and procedures established by our national library associations. It is only a small stretch to ask the library profession to commit to policy and procedures that limit the amount of information stored on RFID tags to the least and most harmless content (the library's own unique barcode number for the item).

4. **Library databases are often maintained by library staff who "grew into" the job and may not have the training or expertise commonly associated with highly secure systems.** It is dangerous to assume that library systems are so powerfully secured that they would be impervious to an organization seeking to probe databases in order to connect library barcodes with library records. Many library databases are quite secure. But it is a fact that library salaries are rarely competitive enough to attract the best technicians, and in many cases library system staff are librarians pressed into duty for computer systems work who do not have a strong grounding in computer security. At any rate, privacy safeguards to be built into the chip and its implementation, not generated from shortsighted assumptions about privacy "dams" such as secure databases or limited technology.

5. **All popular computing technology becomes smaller, cheaper, and more powerful over time, and often within very narrow timeframes.** (The response sometimes heard, that RFID is not a computational technology, is both incorrect and a red herring, as the devices for reading tags are as important as the tags themselves.) Stephen Satchell, a technology journalist, recently wrote, "Regarding bandwidth and antenna power, the cellular approach to radio communications has blown the top off the count of number of separate transmissions that can occur. Look at what has happened with the cell phone, 802.11b wireless, BlueTooth, and other low-power many-receiver systems."

6. **RFID cheaply and efficiently automates surveillance.** That's why it has become popular so quickly; look at CASPIAN's campaign against Benneton for trying to enable live RFID in undergarment purchases. It has been a WOM (Word of Mouth) among librarians that it would be "easier" to follow someone around to see what they were reading, but this is absurd. The promise of RFID is equal to its danger: it vastly reduces the labor overhead required to track items.

7. **Reliance on features unique to library RFID is dangerous.** This is the "privacy dam" rationalization, where the assumption is that devices outside of the control of the library will continue to function as currently designed, that legislation and standard practices will provide natural protections, and that entities outside of librarianship will not be able to acquire equipment capable of reading library RFID tags. A truly privacy-friendly approach to RFID in libraries is to assume that all library RFID tags are world-readable, and work backwards from there.

8. **Librarians nationwide have acknowledged that privacy concerns related to RFID are new territory.** No profession cares more about its users' privacy than librarianship. However, we are only beginning to connect the dots with respect to RFID. We as a profession need to develop best practices for RFID and advertise these practices widely. We can either manage this issue or let it bite us in the fanny as watchdog organizations and the general public ask, correctly, why, and how, we are implementing this technology in libraries.

9. **Libraries are part of the general world commons, and none of our actions take place in a vacuum.** There is an inexorable march toward RFID in libraries, for highly compelling reasons outlined in the first section of this testimony. However, we cannot assume that our tags cannot be read by (or have no interest to) other organizations, or that we are not contributing to the accumulated It has been observed that libraries adopting RFID en masse send an overarching message that we understand and approve of this technology.

10. **Libraries have proved vulnerable to national agendas.** Recent legislation (CIPA and the Patriot Act) demonstrates that libraries have become highly porous battlegrounds for some of the larger privacy and public-forum debates in our society. With CIPA, many library budgets became dependent on the telecommunications discounts made available through E-Rate, essentially forcing some libraries to adopt draconian policies and procedures that limit Constitutionally-protected speech to adult users. With the Patriot Act, we have seen the government become increasingly inventive and aggressive in its efforts to track the reading habits of library users.

Conclusion: RFID in Libraries: Neither Perfidious nor Perfect

Librarians have the best of intentions with respect to use of RFID in libraries, but these intentions must now be conditioned with much better knowledge and more rigorous action than we have demonstrated to date. Following in the tradition of guidance for other technologies—from the humble book to the most elaborate Web site—librarians should put special emphasis on protecting user privacy, disclosure (alerting patrons of the use of RFID), accountability (taking responsibility for the outcomes of RFID), and security.

The library profession must be encouraged to develop best practices on an accelerated timetable, to work with other organizations in developing guiding principles, and to promulgate its advice as widely as possible to model privacy-friendly RFID practices. It would be advisable to recommend a national grant activity directed toward auditing the current environment, establishing and promulgating best practices, and developing national policy on RFID and similar privacy-challenging technologies.

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Memo

TO: AAP Enabling Technologies Committee (ETC)

FROM: Ed McCoyd, Director of Digital Policy

DATE: November 18, 2003

RE: **Information on the RFID (Radio Frequency Identification) System**

I. Overview and Benefits of RFID

Radio frequency identification, or RFID, refers to the use of radio signals to read and write data. A serial number identifying an item can be stored on a microchip with an antenna (together known as an RFID "tag") that transmits information about the identified item to a receiver called a "reader." RFID technology is currently used in applications such as the E-Z Pass toll collection system.

RFID may eventually become a widely used for identification of products in the book industry. While standard bar codes identify the manufacturer and the product generally (e.g., the bar code on one copy of a particular edition of a book is often the same as on all other copies of that edition), RFID tags could be used to identify individual units of items (such as a particular copy of a book), as well as pallets or boxes of books.

A major advantage of RFID technology is that it does not require the tag to be in the line of sight of the reader. In other words, unlike a bar code, the tag does not have to be positioned or waved in front of the reading device in order to be read. RFID signals can also travel through walls and containers. Furthermore, product-related data can be stored on RFID tags and exchanged between tags and readers. Finally, an RFID tag reader can scan many tags at once. These features of RFID create exciting possibilities for the book industry, such as:

- A warehouse worker could scan an outgoing box containing 15 different titles in it to make sure the contents are correct, without having to open the box.

- When a book is placed in the return chute at a library, the library's systems could be notified automatically that the title is back in stock. Shelving information for the title can be stored on the RFID tag, enabling a staff person to re-shelve the returned book immediately without having to look up the shelving information in the library's database.

- One could take stock of books in a warehouse, library, or store without having to individually scan each book.

- As a method of preventing shoplifting, point-of-sale technology could communicate to the RFID tag that the book has been purchased by a consumer. The bookstore staff would be notified if a scanner at the store exit reads a tag on a book that has not yet been purchased.

II. Privacy Concerns

Librarians and other privacy advocates have expressed concern that if an RFID tag is still readable after a book leaves a store or library, privacy abuses may be possible. Perhaps a law enforcement official would use RFID scanning to seek out individuals in possession of books on bomb-making. Others might use the technology to find out people's reading activities for other purposes. One solution in the retail context may be to de-activate a tag on a book once it is purchased (although this is not a workable option in the library setting). Publishers will need to pay close attention to privacy concerns and solutions as RFID applications are introduced over time.

III. Electronic Product Code

The Uniform Code Council is developing the Electronic Product Code (EPC) as a new numbering standard to be used with RFID. The EPC is a unique serial number for any item with an RFID tag, and has the following structure:

First part: EPC version number (such as "01"). Version numbers can vary to permit an abundant supply of EPCs.

Second part: A string identifying the "EPC Manager," usually the manufacturer of the item.

Third part: An "object class" identifier, referring to the type of product (such as a particular brand and type of milk in its given carton size).

Fourth part: A serial number, unique to the actual item being identified (such as an individual carton of milk for sale in a grocery store, with an expiration date of X).

Although information can be stored directly on RFID chips, a popular approach may be for chips to contain a relatively small amount of data, and for additional information associated with the item to be looked up in a database when the EPC is read from the tag.

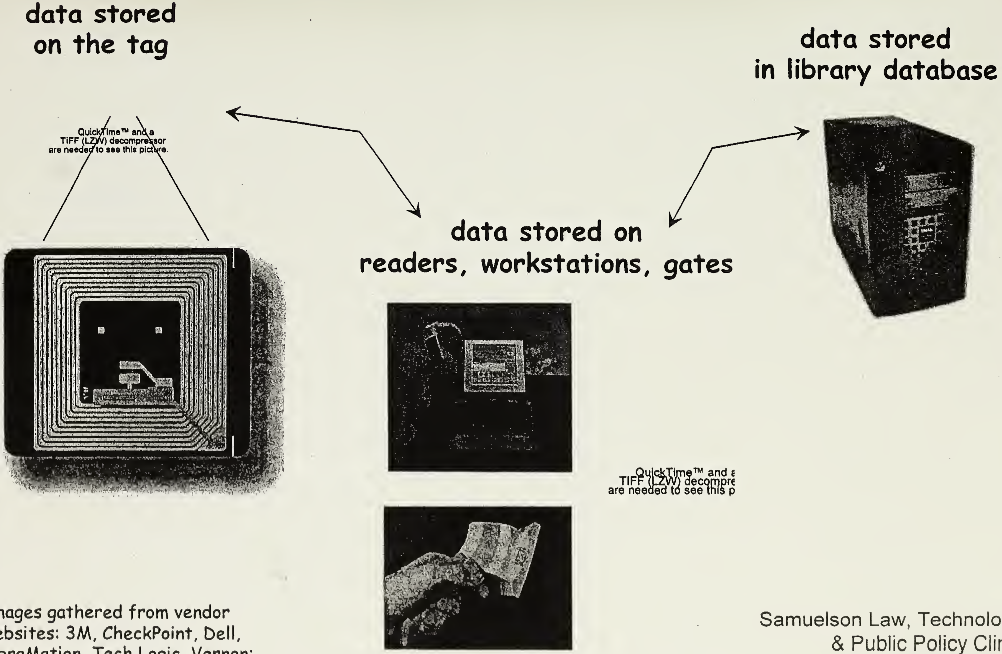
IV. Time Frame for RFID Adoption

In order to implement RFID, retailers need to install readers and associated systems, and manufacturers have to change their production processes to attach tags to items. Conditions will also have to be in place where the expense of purchasing RFID tags is justified.

Industry experts predict that shipping items including cases and pallets will be the first objects assigned RFID tags on a large scale. Wal-Mart is pushing for all of its suppliers to place RFID tags on cases and pallets by 2006.

Kevin Ashton, Executive Director of the Massachusetts Institute of Technology's Auto-ID Center (a project that has developed and promoted RFID technology), reportedly predicts that RFID tagging of individual product items will become common in the U.S. between 2007 and 2010. There isn't a current consensus on when RFID will be widely adopted at the item level, however. AAP will continue to monitor and report RFID developments to our membership.

Mapping the Data



data stored
on the tag

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

data stored on
readers, workstations, gates

QuickTime™ and a
TIFF (LZW) decompre
are needed to see this p

data stored
in library database

Images gathered from vendor
websites: 3M, CheckPoint, Dell,
LibraMation, Tech Logic, Vernon;

Samuelson Law, Technology
& Public Policy Clinic
2004 March

Technical Issues in Library RFID Privacy

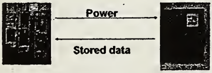
David Molnar
UC-Berkeley
Computer Science

What are we worried about?

- RFID new technology
  - Law of "unintended consequences"
- Read tags through backpacks, briefcases
- Can we track books?
  - "track" = link sightings of same book
- Can we figure out what you're reading?
- Who "we" is depends
  - FBI, marketers, teenagers, college students, pick your favorite

How RFID Works

- Radio Frequency IDentification
- Passive tags – no power source
- Tag carries small amount of data
  - May be read-only or limited read/write
- RFID reader powers tag, extracts data via radio



Two Main Questions

- How to read tags?
- What is on the tag?

How to read tags?

- Need an RFID reader
  - Standardization not privacy issue in long term
- Read range for 13.56Mhz tags low
- Ubiquity of readers bigger problem!
  - Reader at door of every Starbucks?
- Blocking tag signals, "kill", not sufficient
- "Security Bit" does not prevent tag read
- Read passwords?

What is on the tag?

- Varies by vendor and library decision
- Library bar code
  - Unique, static ID → can track book
  - Need library database to learn title/author
    - Unless see book later, learn bar code/title map
- Some vendors suggest more info

  "The Lib~Chip stores data such as type of material, title, author, bar code and serial number, shelf location, last borrowed date, and last returned date." – Libramation site

“Encrypting” Tag Data

- Several meanings to “encrypting” data
  - Proprietary encoding, not different per library
    - Buy reader from company or secondary market
    - Eventually reverse engineered
  - Encrypting bar code with per-library key
    - Does not currently exist
    - Non-library readers can't understand data
    - Still leads to static data → can track book

Bottom Line

- Reading static ID is privacy risk
  - Risk will grow as readers become cheaper, more available, more common
- Minimize data on tag
  - No title, no author, etc. on tag
  - Protect bibliographic database!
- Privacy depends on choices in deployment

BERKELEY PUBLIC LIBRARY BEST PRACTICES

- Library information on the tag should be limited to the barcode.
- Patrons should not have the ability to search the catalog by barcode.
- Do not utilize wireless connections to communicate between security gates, self-checks or other RFID-reading devices and the ILS database unless more security is incorporated in these communications. (Consider VPN for example.)
- The implementation of an RFID system only reinforces the current library's duty to make sure their ILS database is as secure from unauthorized entry as possible.
- Do not implement smart-card RFID patron library cards.
- Inform patrons that your library utilizes RFID technology.

INFLUENCING FUTURE DEVELOPMENTS IN RFID TECHNOLOGY

- Encourage vendors to develop a protocol for formatting and placement of data on the tag (standardization beyond ISO 18000-3) while concurrently developing security to ensure privacy (such as encryption). Work with those knowledgeable about emerging technology to provide input and oversight.
- Encourage vendors to use or develop systems where the reader queries the tag first, rather than having the tag broadcast first, or require authentication before data is transmitted.
- Encourage vendors to develop password technology to help ensure that a reader purchased by an unauthorized source is not able to read any tag.
- To protect the library's investment in the technology, chips should be write-able, so that upgrades can be incorporated. Concurrently, security measures should be developed so that there is protection against unauthorized or accidental writing to the tag.
- Monitor the book industry for developments in the preprocessing of books with RFID tags. Book companies could allow much more data on the tag, or could reference the ISBN number on the tag, leading to easier detection of the book title.

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San Francisco Public Library

WHEREAS, the San Francisco Public Library Commission is pleased to express its GRATITUDE, as well as to RECOGNIZE, HONOR, and COMMEND the generous gift of his painting, "Authors of Latin American Roots," which renowned San Francisco artist ENRIQUE CHAGOYA has made to the beautification of San Francisco's Main Public Library; and

WHEREAS, the many artworks created by ENRIQUE CHAGOYA, a highly respected San Francisco artist, have significantly enriched the cultural life of our City and in this work contributed significantly to heightened awareness of the importance and value of the many significant works of Latino and Latin American authors, Pablo Neruda, Rubén Dario, Carlos Fuentes, Gabriel Garcia Márquez, Sandra Cisneros, Alejo Carpentier, Juan D. Bruce Novoa, Lydia Carrillo, Julio Cortázar, Sor Juana Inés de la Cruz, Claribel Alegria, Elena Poniatowska, Alvaro Mutis, Roberto Sosa, Mario Benedetti, Ana Castillo, José Marti, Gabriela Mistral, Rómulo Gallegos, Roque Dalton, Arturo Roa Bastos, Isabel Allende, César Vallejo, Jorge Amado, Mario Vargas Llosa, Jorge Icaza, Juan Rulfo, Jorge Luis Borges, Rosario Ferré, Ricardo Jaimes Freyre, Octavio Paz, Luisa Valenzuela, Gary Soto, Miguel Angel Asturias, Pedro Henríquez Ureña, and Jose Benjamín Quintero, whose names are inscribed on the canvas, to the cultural life of San Francisco, and indeed the entire world; and

WHEREAS, the San Francisco Public Library Commission will SALUTE ENRIQUE CHAGOYA, an outstanding exemplar of the high ideals of professional achievement, personal character, and community leadership at its regular meeting on March 4, 2004; Now,

THEREFORE, BE IT RESOLVED that the SAN FRANCISCO PUBLIC LIBRARY COMMISSION in RECOGNITION and HONOR of his generous gift of his mural painting, "Authors of Latin American Roots," to the Main Library, do hereby RECOGNIZE, HONOR, AND THANK

ENRIQUE CHAGOYA

In Witness Whereof, I have hereunto
set my hand and caused the seal of the
San Francisco Public Library Commission
to be affixed.

CHARLES A. HIGUERAS, A.I.A.
PRESIDENT
MARCH 4, 2004

San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

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Gavin Newsom
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Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SPECIAL NOTICE

THE REGULAR MEETING OF THE SAN FRANCISCO PUBLIC LIBRARY COMMISSION SCHEDULED FOR THURSDAY, MARCH 18, 2004 HAS BEEN

CANCELED

THE NEXT REGULAR MEETING OF THE PUBLIC LIBRARY COMMISSION IS SCHEDULED FOR THURSDAY, APRIL 1, 2004.

POSTED, MARCH 8, 2004

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SAN FRANCISCO
PUBLIC LIBRARY

SAN FRANCISCO PUBLIC LIBRARY COMMISSION - ACCESSIBLE MEETINGS POLICY

TO ENSURE THE PARTICIPATION OF THE DISABLED PUBLIC IN ALL COMMISSION PUBLIC MEETINGS, THE FOLLOWING ITEMS CONCERNING ACCESSIBILITY WILL BE AVAILABLE:

SIGN LANGUAGE INTERPRETERS OR NOTE TAKERS WILL BE AVAILABLE UPON REQUEST. PLEASE CONTACT SERVICES FOR THE DEAF AND HEARING IMPAIRED AT 415/557-4433 (TDD) OR 415/557-4434 (VOICE) AT LEAST 48 HOURS PRIOR TO THE MEETING. LATE REQUESTS WILL BE HONORED IF POSSIBLE.

A SOUND ENHANCEMENT SYSTEM WILL BE AVAILABLE UPON REQUEST AT THE MEETINGS. PLEASE CONTACT SERVICES FOR THE DEAF AND HEARING IMPAIRED AT 415/557-4433 (TDD) OR 415/557-4434 (VOICE) AT LEAST 48 HOURS PRIOR TO THE MEETING. LATE REQUESTS WILL BE HONORED IF POSSIBLE.

A PERSON WHO IS DEAF OR HEARING IMPAIRED MAY GAIN MEETING INFORMATION PRIOR TO THE MEETING BY CALLING 415/557-4433 (TDD) OR 415/557-4434 (VOICE). IN ADDITION, THE CALIFORNIA RELAY SERVICE CAN BE USED BY INDIVIDUALS WITH HEARING AND SPEECH IMPAIRMENTS BY CALLING 1-800/735-2929 (TDD) OR 1-800/735-2992 (VOICE).

MINUTES OF THE MEETINGS ARE AVAILABLE IN ALTERNATIVE FORMATS. IF YOU REQUIRE THE USE OF A READER DURING THE MEETING, PLEASE CONTACT THE LIBRARY FOR THE BLIND AND PRINT HANDICAPPED AT 415/557-4253 AT LEAST 48 HOURS IN ADVANCE OF THE NEED.

INDIVIDUALS WITH SEVERE ALLERGIES, ENVIRONMENTAL ILLNESS, MULTIPLE CHEMICAL SENSITIVITY OR RELATED DISABILITIES SHOULD CALL THE ACCESSIBILITY HOTLINE AT 415/554-8925 TO DISCUSS MEETING ACCESSIBILITY. IN ORDER TO ASSIST SAN FRANCISCO'S EFFORTS TO ACCOMMODATE SUCH PEOPLE, ATTENDEES AT PUBLIC MEETINGS ARE REMINDED THAT OTHER ATTENDEES MAY BE SENSITIVE TO VARIOUS CHEMICAL-BASED PRODUCTS. PLEASE HELP THE CITY TO ACCOMMODATE THESE INDIVIDUALS.

LIBRARY COMMISSION MEETINGS WILL BE HELD AT THE MAIN LIBRARY, 100 LARKIN STREET AT GROVE, LOWER LEVEL, KORET AUDITORIUM, EXCEPT WHEN OTHERWISE NOTICED. THE COMMISSION MEETING ROOM IS WHEELCHAIR ACCESSIBLE. THE CLOSEST ACCESSIBLE BART STATION IS CIVIC CENTER. THE ACCESSIBLE MUNI LINE SERVING THIS LOCATION IS THE #19 POLK. FOR INFORMATION ABOUT MUNI'S ACCESSIBLE SERVICE, PLEASE CALL 415/923-6142.

THERE IS ACCESSIBLE PARKING AVAILABLE AT 355 MCALLISTER, CIVIC CENTER PLAZA GARAGE. CALL 415/863-1537.

ACCESSIBLE SEATING FOR PERSONS WITH DISABILITIES (INCLUDING THOSE USING WHEELCHAIRS) WILL BE AVAILABLE AT MEETINGS.

THE RINGING OF AND USE OF CELL PHONES, PAGERS AND SIMILAR SOUND-PRODUCING ELECTRONIC DEVICES ARE PROHIBITED AT THIS MEETING. PLEASE BE ADVISED THAT THE CHAIR MAY ORDER THE REMOVAL FROM THE MEETING ROOM OF ANY PERSON(S) RESPONSIBLE FOR THE RINGING OR USE OF A CELL PHONE, PAGER, OR OTHER SIMILAR SOUND PRODUCING ELECTRONIC DEVICES.

KNOW YOUR RIGHTS UNDER THE SUNSHINE ORDINANCE

GOVERNMENT'S DUTY IS TO SERVE THE PUBLIC, REACHING ITS DECISIONS IN FULL VIEW OF THE PUBLIC. COMMISSIONS, BOARDS, COUNCILS AND OTHER AGENCIES OF THE CITY AND COUNTY EXIST TO CONDUCT THE PEOPLE'S BUSINESS. THIS ORDINANCE ASSURES THAT DELIBERATIONS ARE CONDUCTED BEFORE THE PEOPLE AND THAT CITY OPERATIONS ARE OPEN TO THE PEOPLE'S REVIEW.

FOR MORE INFORMATION ON YOUR RIGHTS UNDER THE SUNSHINE ORDINANCE (CHAPTER 67 OF THE SAN FRANCISCO ADMINISTRATIVE CODE) OR TO REPORT A VIOLATION OF THE ORDINANCE, CONTACT DONNA HALL, ADMINISTRATOR, THE SUNSHINE ORDINANCE TASK FORCE, CITY HALL, ROOM 409 1 DR. CARLTON B. GOODLETT PLACE, SAN FRANCISCO, CA 94102-4689 OR AT 415/554-7724 PH. 415/554-5163 FAX AND WEBSITE AT DONNA_HALL@SFGOV.ORG. COPIES OF THE SUNSHINE ORDINANCE CAN BE OBTAINED FROM THE CLERK OF THE SUNSHINE TASK FORCE, THE SAN FRANCISCO PUBLIC LIBRARY AND ON THE CITY'S WEBSITE AT WWW.SFGOV.ORG/SUNSHINE

SAN FRANCISCO LOBBYIST ORDINANCE

ATTENTION: INDIVIDUALS AND ENTITIES THAT INFLUENCE OR ATTEMPT TO INFLUENCE LOCAL LEGISLATIVE OR ADMINISTRATIVE ACTION MAY BE REQUIRED BY THE SAN FRANCISCO LOBBYIST ORDINANCE [SF CAMPAIGN & GOVERNMENTAL CONDUCT CODE SEC. 2.100] TO REGISTER AND REPORT LOBBYING ACTIVITY. FOR MORE INFORMATION ABOUT THE LOBBYIST ORDINANCE, PLEASE CONTACT THE ETHICS COMMISSION AT 30 VAN NESS AVENUE, SUITE 3900, SAN FRANCISCO, CA 94102, TELEPHONE (415) 581-2300, FAX (415) 581-2317 AND WEB SITE: SFGOV.ORG/ETHICS.

MICHAEL HOUSH, COMMISSION SECRETARY 9/11/03

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PUBLIC LIBRARY

San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
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SAN FRANCISCO
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Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

NOTICE OF MEETING

A regular meeting of the San Francisco Public Library Commission will be held as follows:

DATE: Thursday, April 1, 2004
TIME: 4:00 PM
PLACE: Koret Auditorium, Main Library, lower level

The meeting will be called to order.

1. PUBLIC COMMENT

(This item is to allow members of the public to comment generally on matters within the Commission's purview as well as to suggest new agenda items for the Library Commission's consideration.)

2. APPROVAL OF THE MINUTES ACTION

Presentation of, discussion of, and possible action to approve the Minutes of the regular Commission meeting of March 4, 2004.
Explanatory document: draft Minutes

3. CITY LIBRARIAN'S REPORT by City Librarian Susan Hildreth DISCUSSION

(This item is to allow the City Librarian to report on recent Library activities and make announcements)
The City Librarian will report on the following subjects: a Prop. 14 update; filming in the San Francisco History Center; and exhibits and programs.

4. RFID RECOMMENDATION ACTION

Presentation on and discussion of use of a Radio Frequency Identification (RFID) system in the Library in order to reduce workplace injuries and enhance Library operations, and possible action to approve acquisition of RFID-based technology to replace existing barcode based circulation and magnetic security systems, subject to adoption of suitable criteria and policies to protect user privacy.

5. LIBRARY 2004/05 BUDGET REPORT DISCUSSION

Presentation of, and discussion of an update report on the Library's proposed 2004/05 Budget.

6. FRIENDS OF THE LIBRARY REPORT DISCUSSION

(This item is to allow the Friends of the San Francisco Public Library to inform the Commission of their current and proposed activities.)

SAN FRANCISCO PUBLIC LIBRARY COMMISSION - Accessible Meetings Policy

To ensure the participation of the disabled public in all Commission public meetings, the following items concerning accessibility will be available:

Sign Language interpreters or note takers will be available upon request. Please contact Services for the Deaf and Hearing Impaired at 415/557-4433 (TDD) or 415/557-4434 (Voice) at least 48 hours prior to the meeting. Late requests will be honored if possible.

A sound enhancement system will be available upon request at the meetings. Please contact Services for the Deaf and Hearing Impaired at 415/557-4433 (TDD) or 415/557-4434 (Voice) at least 48 hours prior to the meeting. late requests will be honored if possible.

A person who is deaf or hearing impaired may gain meeting information prior to the meeting by calling 415/557-4433 (TDD) or 415/557-4434 (Voice). In addition, the California Relay Service can be used by individuals with hearing and speech impairments by calling 1-800/735-2929 (TDD) or 1-800/735-2992 (Voice).

Minutes of the meetings are available in alternative formats. If you require the use of a reader during the meeting, please contact the Library for the Blind and Print Handicapped at 415/557-4253 at least 48 hours in advance of the need.

Individuals with severe allergies, environmental illness, multiple chemical sensitivity or related disabilities should call the accessibility hotline at 415/554-8925 to discuss meeting accessibility. In order to assist San Francisco's efforts to accommodate such people, attendees at public meetings are reminded that other attendees may be sensitive to various chemical-based products. Please help the City to accommodate these individuals.

Library Commission meetings will be held at the Main Library, 100 Larkin Street at Grove, Lower Level, Koret Auditorium, except when otherwise noticed. The Commission meeting room is wheelchair accessible. The closest accessible BART station is Civic Center. The accessible MUNI line serving this location is the #19 Polk. For information about Muni's accessible service, please call 415/923-6142.

There is accessible parking available at 355 McAllister, Civic Center Plaza Garage. Call 415/863-1537.

Accessible seating for persons with disabilities (including those using wheelchairs) will be available at meetings.

The ringing of and use of cell phones, pagers and similar sound-producing electronic devices are prohibited at this meeting. Please be advised that the Chair may order the removal from the meeting room of any person(s) responsible for the ringing or use of a cell phone, pager, or other similar sound producing electronic devices.

Know Your Rights Under The Sunshine Ordinance

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions, boards, councils and other agencies of the City and County exist to conduct the people's business. This ordinance assures that deliberations are conducted before the people and that City operations are open to the people's review.

For more information on your rights under the Sunshine Ordinance (Chapter 67 of the San Francisco Administrative Code) or to report a violation of the ordinance, contact Donna Hall, Administrator, the Sunshine Ordinance Task Force, City Hall, Room 409 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102-4689 or at 415/554-7724 ph. 415/554-5163 FAX and website at Donna_Hall@sfgov.org. Copies of the Sunshine Ordinance can be obtained from the Clerk of the Sunshine Task Force, the San Francisco Public Library and on the City's website at www.sfgov.org/Sunshine

San Francisco Lobbyist Ordinance

Attention: Individuals and entities that influence or attempt to influence local legislative or administrative action may be required by the San Francisco Lobbyist Ordinance [SF Campaign & Governmental Conduct code sec. 2.100] to register and report lobbying activity. For more information about the Lobbyist Ordinance, please contact the Ethics Commission at 30 Van Ness Avenue, Suite 3900, San Francisco, CA 94102, telephone (415) 581-2300, fax (415) 581-2317 and web site: sfgov.org/ethics.

Michael Housh, Commission Secretary 9/11/03

7. LABOR UNION REPORT

(This item is to allow members of library labor organizations to report on employee matters within the Commission's purview as well as to suggest new agenda items for the Library Commission's consideration.)

8. NEW BUSINESS

(This item is to allow Commissioners to introduce new agenda items for consideration.)

9. ADJOURNMENT (requires motion and public comment) ACTION

3/26/04 - M. Housh, Commission Secretary

Explanatory documents: Copies of listed explanatory documents are available as follows: (1) from the Commission Secretary/Custodian of Records, Main Library, 6th Floor, (2) in the rear of the Koret Auditorium immediately before and during the meeting, and (3)to the extent possible, on the Library's website at http://sfpl.org/.

Additional materials not listed as explanatory documents on this agenda, if any, that are distributed to the Library Commissioners prior to or during the meeting in connection with any agenda item will be available to the public for inspection and copying in accordance with Government Code Section 54954.1 and Sunshine Ordinance §§ 67.9, 67.28(b)& 67.28(d).

DRAFT

San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

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Gavin Newsom
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Vice President

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Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Draft Minutes of the regular meeting of Thursday, April 1, 2004
The San Francisco Public Library Commission held a regular meeting on Thursday, April 1, 2004 in the Koret Auditorium, Main Library.

The meeting was called to order at 4:20pm.

The following members were present: Commissioners Chin, Coulter, Higueras, and Streets.
Commissioners Steiman and Strobin were excused attendance.
Commissioner Bautista joined the meeting at 5:14pm.

President Higueras announced that the taking of agenda items would be re-ordered so that the RFID Recommendation and the Library Budget items would be heard before the City Librarian's report.

AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public discussed the Board of Supervisors Rules Committee meeting.
Mr. Peter Warfield commented on the Rules Committee meeting, and his Library RSI injuries reports request.
Ms. Deetje Boler spoke about book collection loss replacement, and RFID costs

AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

Public comment on AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

An anonymous member of the public described the Minutes as an "April Fool's" joke. Mr. Peter Warfield commented on the Minutes lack of detail of comments and discussion.

COMMISSION discussion of AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

MOTION: by Commissioner Chin, 2nd Commissioner Streets for approval of the Minutes of the regular meeting of March 4, 2004.

Approved by the following vote:

ACTION: 4-0 AYE (Chin, Coulter, Higueras, and Streets)

Please note: These are draft minutes subject to change by the Library Commission. Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

AGENDA ITEM #4 RFID RECOMMENDATION (taken out of order as previously announced)

Presentation on and discussion of use of a Radio Frequency Identification (RFID) system in the Library in order to reduce workplace injuries and enhance Library operations, and possible action to approve acquisition of RFID-based technology to replace existing barcode based circulation and magnetic security systems, subject to adoption of suitable criteria and policies to protect user privacy.

(Presentations were made by Kathy Lawhun, Chief of the Main Library, and San Francisco Department of Public Health Occupational Health and Safety experts Karen Peckman and Nancy Terranova and by Deputy City Librarian Paul Underwood. Materials for these presentations were prepared with the assistance of the Library's RFID Task Force - Kathy Lawhun, Donna Corbeil, David Dodd, David Dale, and Terry Gwiazdowski)

Public comment on AGENDA ITEM #4 RFID RECOMMENDATION

Anonymous member of the public suggested that gift funded portions of the RFID budget could derive from industry sources.
Mr. Peter Warfield opposed to RFID implementation, and found the documentation and policies inadequate.
Ms. Ann Brick, ACLU, opposed implementation and termed an independent review crucial.
Mr. David Molnar clarified his March 4th presentation on RFID.
Mr. Lee Tien, EFF, opposed to RFID implementation, citing potential problems with new technologies.
Ms. Deetje Boler opposed to RFID implementation, and urged consideration of the Precautionary Principle.
Mr. Eric Epson found concerns with RFID privacy risk unrealistic, thinking database security more important.

Commission discussion of AGENDA ITEM #3 RFID RECOMMENDATION

The consensus of the Commission was that staff should prepare additional background materials addressing: various aspects of how RFID would to be implemented by the San Francisco Public Library including consideration of ongoing costs of RSI injuries and loss of collection materials; and policies regarding its use that would need clarification prior to implementation. The City Librarian proposed to provide additional information and bring this item back for Commission action at its May 6th meeting.

A recess was called at 5:34pm
The Public Library Commission returned to session at 5:44pm

President Higueras left the meeting during the recess.

AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An update report on the Library's proposed 2004/05 Budget.

(Library Finance Director George Nichols presented an update report on the overall City and state budget and revenue situation and discussed various contingency budget reduction plans as changes resulting in revenue losses or increased costs to the Library that have or will occur).

Public comment on AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An anonymous member of the public noted that terms used in the report hampered understanding.
Mr. Peter Warfield expressed concerned with priorities for cuts, recommending that the book budget be last to cut.

Commission discussion of AGENDA ITEM #4 2004/05 LIBRARY BUDGET

The Commissioners voiced concern that ongoing preventative maintenance be continued when possible and raised questions concerning the long-term impact of increasing personnel costs on future budgets.

AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

The City Librarian reported on the following subjects: a hearing about creation of Board appointed library advisory committee at the Board of Supervisor's Rules Committee; Dr. Starr's retirement as State Librarian; reduction in the available funds for Prop 14 (State Library Bond) Cycle 3 grants from $90 to $77 million; a report on PBS History Detectives filming in the San Francisco History center, and programs and exhibits.

Public comment on AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

An anonymous member of the public commented on Prop 14, and Dr. Starr's retirement.

AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

Martín Gómez, Executive Director of the Friends of the Library reported on: the 8th Annual Library Laureates Dinner on April 30; concerning their approval of a $42, 500 grant to fund the Library's 125th Anniversary activities; and consideration of $900,000 in grant requests submitted by library staff for 2004/05.

Public comment on AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

(None offered)

AGENDA ITEM #7 LABOR UNION REPORT

(No report offered)

AGENDA ITEM #8 NEW BUSINESS

(No items were proposed)

AGENDA ITEM #9 ADJOURNMENT

MOTION: by Commissioner Bautista, 2nd Commissioner Chin that the meeting be adjourned.

Approved by the following vote:
4-0 AYE (Bautista, Chin, Coulter, and Streets)

There being no further business, at the hour of 7:17pm the Public Library Commission adjourned.

Michael Housh, Commission Secretary 4/5/04

Please note: These are draft minutes subject to change by the Library Commission. Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS to the April 1, 2004 Minutes:

Privacy Policy;
Implementation Plan;
Request for Proposals;
CA Factsheet on EMF (PDF);
RFID & Health Bibliography;
Fast Facts
2004/05 Budget;
April 1, 2004 Report;
Budget Attachments B & C

The City Librarian's Report

Minutes of the regular Commission Meeting of April 1, 2004

Appendix A

Library Commission meeting of March 4, 2004

The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16..

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The number of members of the public who spoke anonymously at this meeting. 1

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004
RFID and Health Bibliography

Health and Safety

Organizations

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- California Electric and Magnetic Fields Program (Part of the California Department of Health, Environmental Health Investigations Branch.) http://www.dhs.ca.gov/ps/deodc/ehib/emf/
- EMR Network. http://www.emrnetwork.org/
- Federal Communications Commission, Office of Engineering and Technology. Radio Frequency Safety. http://www.fcc.gov/oet/rfsafety/
- International Commission on Non-Ionizing Radiation Protection. http://www.icnirp.org/
- Pacific Gas & Electric, Understanding Electric and Magnetic Fields website. http://www.pge.com/education_training/about_energy/emf/
- San Francisco Neighborhood Antenna-Free Union (SNAFU). http://www.antennafreeunion.org/
- Sutro Tower Community Perspectives. http://www.sutro.org/
- National Institute of Environmental Health Sciences, EMF RAPID (Electric and Magnetic Fields Research and Public Information Dissemination Program) website: http://www.niehs.nih.gov/emfrapid/home.htm
- UC Berkeley Communication and Network Services Radio Frequency Safety. http://radio.cns.berkeley.edu/safety/rf-safety.shtml
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Articles and Reports

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- International EMF Project, Fact Sheets and Backgrounders. (Part of the World Health Organization website) http://www.who.int/docstore/peh-emf/publications/facts_press/fact_english.htm
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3/31/04

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004

Fast Facts about RFID and EMF

- RFID stands for radio frequency identification.
- EMF stands for electromagnetic fields.
- Radio frequency is a type of electromagnetic field made of radio waves.
- Electromagnetic fields are made of electric and magnetic fields.
- Electromagnetic fields are present everywhere on the earth.
- Sources of electromagnetic fields include the sun, thunderstorms, household appliances, cellular phones, and more.
- Electromagnetic fields are defined by their frequency and their wavelength.
- Wavelength refers to the distance between one wave and the next.
- Frequency refers to the number of times the energy vibrates or oscillates.
- The unit of measurement of an electric field is volts per meter (V/m)
- The unit of measurement of a magnetic field is a gauss in the USA and a tesla in Europe.
- The unit of measurement for frequency is a hertz. One hertz is one cycle per second (1 Hz). 1 kHz (kilohertz) is one thousand cycles per second. 1 MHz (megahertz) is one million cycles per second. 1 GHz (gigahertz) is one billion cycles per second.
- Radio frequency constitutes one part of the electromagnetic field range.
- The frequency range of electromagnetic fields runs from 1 Hz-300 GHz).
- The frequency of the RFID tags that SFPL will use is 13.56 MHz.

3/31/04

SAN FRANCISCO PUBLIC LIBRARY
PRIVACY POLICY

Policy Outline

I. Opening statements

- Confidentiality of records
- Intellectual freedom
- Personal information the library collects and does not collect
- Library records protected under California Government Code

II. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT ACT)

- General information
- Sections 214-216 pertaining to libraries and book stores

III. San Francisco's Response to the USA PATRIOT ACT

- Board of Supervisor's resolution
- Library Commission resolution
- Proposition E, passed by voters March 2, 2004

IV. Public computers

- Computer reservation system and access
- Search stations programmed to delete booking history

V. Computer searching

- Variety of search alternatives
- Users prohibited from searching by barcode

VI. Email and Web forms

- Reference questions, regardless of format of transmission, treated with confidentiality
- Email not necessarily secure against interception and disclosure

VII. Links to other sites

- SFPL not responsible for the privacy practices of other sites

VIII. Library cards and circulation records

- SFPL does not maintain a history of what a library user has previously checked out once books and materials have been returned on time
- When overdue materials are returned and the account is cleared, title information associated with the library card number is deleted
- What information is needed to obtain a library card

IX. Security

- SFPL uses software programs that monitor network traffic to identify unauthorized attempts to upload or change information or otherwise cause damage
- Unauthorized attempts to upload information or change information prohibited under the Computer Fraud and Abuse Act of 1986 and 18 U.S.C. Section 1001 and 1030
- Except for the above purposes, no other attempts are made to identify individual library users or their usage habits

X. Law enforcement

- American judicial system provides the mechanism for seeking release of confidential records
- Library records will not be made available to any agency of the state, federal or local government except pursuant to such process, order or subpoena as may be authorized under the authority of, and pursuant to, federal, state, or local law relating to civil, criminal, or administrative discovery procedures or legislative investigatory power

XI. Information automatically collected and stored

- Types of information automatically gathered for statistical purposes
- Data collected not connected to any personal information or identity

Request for Proposals
San Francisco Public Library
Radio Frequency Identification (RFID) Systems
Proposed Table of Contents

I. Project Description
II. Project Goals
III. Specifications
    1. Tags
        a. data elements encoded
        b. collision rate
        c. placement on item
        d. AV/media
        e. interchangeability of system
        f. research on durability & reliability
        g. specify read/write elements
    2. Security
        a. how secured
        b. where data stored, no storage of data at gates
        c. how security will accomplished with 2 systems
    3. Conversion/replicating stations
    4. Circulation stations
        a. any proprietary hardware or software
        b. how works with 2 systems
        c. read range
        d. number of items able to be checked out at one time
        e. ability to circulate if system down
        f. ergonomic benefits
    5. Self-charge stations
        a. read range
        b. ability to work with 2 systems
        c. number of items able to be checked out at one time
        d. multilingual interfaces
        e. ergonomic benefits
    6. Inventory control
    7. Peripheral equipments
        a. book drops
        b. patron self-check in stations
        c. compatibility with sorting systems
        d. third party vendor products and compatibility
    8. Network/Automated Library System Requirements

9. Technical support and maintenance
    a. samples of documentation
    b. what elements are covered
    c. 24/7 support
    d. average time to resolve problems
    e. examples of custom programming
    f. warranties
10. Client references
    a. identify all libraries using system
    b. identify all that libraries that are also Innovative customers
    c. identify non-library clients
11. Other
    a. training required
    b. training provided
    c. any standard used in manufacturing system
    d. vendor participation in establishing standards
    e. list of library automation vendors system compatible with
    f. list any products under development
12. Company information
    a. annual report including statement of revenue
    b. number of employees for RFID operations
    c. sample contract

IV. Cost Proposal
  1. Itemized all items for a complete system
  2. Five year estimate for total cost and any discounts
  3. Phased implementation

V. Submission Requirements
  1. Date due
  2. Number of copies
  3. City & County of San Francisco purchasing & vendor requirements

VI. Selection Criteria

VII. Project Timeline

Attachments
Number of branches, number of items by type, annual circulation

3/31/04

San Francisco Public Library RFID Implementation
Proposed Plan of Action

Follow Berkeley Public Library's Recommended Best Practices:

- Library information on the tag should be limited to the barcode.
- Patrons should not have the ability to search the catalog by barcode.
- Do not utilize wireless connections to communicate between security gates, self-checks or other RFID-reading devices and the ILS database unless more security is incorporated in these communications.
- The implementation of an RFID system only reinforces the current library's duty to make sure their ILS database is as secure from unauthorized entry as possible.
- Do not implement smart-card RFID patron library cards.
- Inform patrons that your library utilizes RFID technology.

Plus

- Consider encryption of barcode data on tags

Action before, during & after RFID implementation:

- Encourage vendors to develop a protocol for formatting and placement of data on the tag while concurrently developing security to ensure privacy (such as encryption). Work with those knowledgeable about emerging technology to provide input and oversight.
- Encourage vendors to use or develop systems where the reader queries the tag first, rather than having the tag broadcast first, or require authentication before data is transmitted.
- Encourage vendors to develop password technology to help ensure that a reader purchased by an unauthorized source is not able to read any tag.
- To protect the library's investment in the technology, chips should be write-able, so that upgrades can be incorporated. Concurrently, security measures should be developed so that there is protection against unauthorized or accidental writing to the tag.
- Monitor the book industry for developments in the preprocessing of books with RFID tags. Book companies could allow much more data on the tag, or could reference the ISBN number on the tag, leading to easier detection of the book title.
- Monitor ongoing health studies.
- Monitor Weblogs and news sources for any RFID developments.
- Encourage development of green manufacturing techniques for tags (see http://www.rfidjournal.com/article/articleview/851/1/1/ for more information).

- Monitor and participate in discussions on RFID with library associations & taskforces (California Library Association, Public Library Association & American Library Association).

Standards Examined:

- **International Organization for Standardization ISO 15693-1** Physical characteristics of RFID labels
- **ISO 15693-2/3** Communication between reader & RFID label
- **NBLC Netherlands Association of Public Libraries** Generic Set of requirements RFID for public libraries
- **European Telecommunications Standards Institute ETSI 300 330** Radio equipment, short range devices, technical characteristics ..for radio equipment in the frequency range 9 kHZ to 25 MHz
- **Code of Federal Regulation 47 CFR Pt.15.225** Emissions from gates & readers
- **Universal Laboratories UL 1950 (to be replaced by UL 60950 by 2005)** Safety of Information Technology Equipment
- **Federal Communications Commission OET Bulletin #63** Understanding the FCC Regulations for Low-Power, Non-Licenses Transmitters
- **ISO Standards being developed ISO 21928** Data elements for RFID in libraries, **ISO 18000-3** Information Technology, radio-frequency identification for item management, parameters for air interface communications at 13.56 MHz

Organizations & experts contacted:

- Marlene Vogelsand, Resource Specialist, Pacific Energy Center
- Michael Herz, EMF Consultant, PG&E
- Ronald Arenson, Chair, Dept. of Radiology, UCSF
- California Dept. of Occupation Health & Safety
- California Electric and Magnetic Fields Program
- Dr. Patricia Buffler, Dean, School of Public Health, UCB
- Dr. Rajiv Bhatia, Medical Director, Environmental Health Management and Occupational Safety & Health, Dept. of Public Health (DPH)
- Vickie Wells, Director, Occupational Safety & Health unit, DPH
- Karen Heckman, Senior Industrial Hygienist, DPH
- Nancy Terranova, Safety Officer, DPH

3/31/04

SHORT FACTSHEET ON EMF

The use of electricity is taken for granted, but people are still concerned about whether powerlines and appliances are safe or unsafe. Here are answers to some common questions about electric and magnetic fields. See also our Web site at http://www.dhs.ca.gov/ps/deodc/ehib/.

What are electric and magnetic fields and why are people concerned about them?

Electric and magnetic fields are a basic force of nature (like gravity), generated by electricity. They are found almost everywhere. Electric and magnetic fields are found in nature, where they are created by such things as lightning and static electricity. Man-made fields are found wherever people use electricity, such as near powerlines and electrical appliances. Like sound, electric and magnetic fields are made of a mixture of components and so can be described in many different ways. Both have wave-like properties such as strength and "frequency" (how often they cycle back and forth). Sound can be loud (strong) or soft (weak), high or low pitched (different frequencies), suddenly loud or constant in tone, and pure or jarring. Similarly, electric and magnetic fields are a mixture of components. They can be strong or weak, have a high or low frequency, have sudden increases in strength ("transients") or a constant strength, and consist of one pure frequency or several (called "harmonics"). For example, the *strength* of a field can be weak and constant, as in most nighttime home environments, or it can be strong and vary from high to low every few seconds, as from an electric blanket set on high.

Powerlines and wiring in buildings and appliances generate 50 and 60 Hertz fields, sometimes referred to as "power frequency" fields. Hertz is the unit for measuring the frequency of fields in the number of wave cycles each second. The lower the frequency of a field, the lower its energy. Power frequency fields are low frequency fields and have low energy levels. Microwave and x-ray fields are high frequency fields and have high energy levels.

Early scientific studies found a link between increased rates of cancer and closeness to certain kinds of powerlines that can cause strong magnetic fields. Over the last two decades concern about the health effects of electric and magnetic fields has increased.

Where does EMF come from?

We are exposed to EMF from many sources, including high voltage transmission lines (usually on metal towers) carrying electricity from generating plants to communities, and distribution lines (usually on wooden telephone poles) that bring electricity to our homes, schools and workplaces. We are also exposed to magnetic fields from wiring in buildings and from all our electric appliances, like TV sets, radios, hair dryers, electric blankets and electric tools.

Most of the fields we experience in a day come from sources other than powerlines, such as wiring and appliances in homes or workplaces. The strength of both electric and magnetic fields decreases as you move away from their source, just as the heat from a campfire decreases with distance. For both electric and magnetic fields strength decreases more quickly with distance from "point" sources like appliances than from "line"

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A project of the California Department of Health Services and the Public Health Institute

sources such as powerlines. For example, the magnetic field is down to "background levels" (the naturally occurring amounts) at 3 or 4 feet away from an appliance (*table 1*). It reaches background levels around 60 to 200 feet from a distribution line and about 300 to 1000 feet from a transmission line.

In spite of these similarities, electric fields and magnetic fields have somewhat different properties and possibly different ways of influencing our bodies. Electric fields can be shielded or weakened by trees, buildings and even human skin, but magnetic fields are not so easily blocked. Most recent studies have focused on the health effects of magnetic fields because they are not readily shielded and are easier to measure than electric fields.

Table 1. Examples of magnetic fields at particular distances from appliance surfaces.

	MILLIGAUSS (mG)	
	at 1 foot	at 3 feet
aquarium pump	0.35-18.21	0.01-1.17
band saw	0.51-14.24	0.05-0.75
can opener	7.19-163.02	1.30-6.44
clock	0.34-13.18	0.03-0.68
clothes iron	1.66-2.93	0.25-0.37
coffee machine	0.09-7.30	0-0.61
computer monitor	0.20-134.7	0.01-9.37
copier	0.05-18.38	0-2.39
desktop light	32.81	1.21
dishwasher	4.98-8.91	0.84-1.63
drill press	0.21-33.33	0.03-8.35
fax machine	0.16	0.03
food processor	6.19	0.35
garbage disposal	2.72-7.79	0.19-1.51
hairdryer	0.1-70	0.1-2.8*
microwave oven	0.59-54.33	0.11-4.66
mixer	0.49-41.21	0.09-3.93
portable heater	0.11-19.60	0-1.38
printer	0.74-43.11	0.18-2.45
portable fan	0.04-85.64	0.03-3.12
radio	0.43-4.07	0.03-0.98
range	0.60-35.93	0.05-2.83
refrigerator	0.12-2.99	0.01-0.60
scanner	2.18-26.91	0.09-3.48
sewing machine	3.79-7.70	0.35-0.45
tape player	0.13-6.01	0.01-1.66
television	1.80-12.99	0.07-1.11
toaster	0.29-4.63	0.01-0.47
vacuum	7.06-22.62	0.51-1.28
VCR	0.19-4.63	0.01-0.41
vending machine	0.46-5.05	0.02-0.59

L. Zaffanella, School Exposure Assessment Survey, California EMF Program, interim results, Nov. 1997.

What kind of scientific studies have been done?

Nobody knows for sure whether exposure to 50 and 60 Hertz fields is a health risk. Three kinds of studies have been done to explore this:

1) laboratory studies that expose human or animal cells or organs to fields, looking for biological changes

2) laboratory studies that expose animals to fields, looking for changes in body function, chemistry, behavior or general health

3) "epidemiological" studies that observe people's health and evaluate whether groups that have high or unusual EMF exposure have a greater chance for developing a disease like cancer than groups with "normal" or usual exposures

What do these studies show?

First, *these studies do not show a clear pattern of health hazards*. Some but not all animal and cell studies have shown biological changes linked with *magnetic field* exposure. However, it is not clear whether these biological changes would be the same in humans. Second, it is not clear which component (frequency, strength, harmonics, etc.) of magnetic field exposure might be hazardous.

Concern about possible health hazards from electric power use is supported by results of some scientific studies, but the evidence they provide is still incomplete and inconclusive and even, in some cases, contradictory. A good deal of research is underway to help resolve these questions and uncertainties. Most but not all epidemiological studies show an association between leukemia (a type of cancer) and an "indirect" estimate of high magnetic field exposure such as living very near a type of powerline that could cause of high magnetic fields or working where there is high electrical exposure. These estimates may not really represent a person's true exposure at the critical time period when they may have started developing an illness. Also, these studies show that some estimates of magnetic field exposure might be *related* to cancer, but this does not necessarily mean

that magnetic fields *cause* cancer. Indirect ways of estimating exposure may unintentionally include other risk factors like chemicals used at work or living in a particular neighborhood.

How would magnetic field measurements taken in my house compare to others?

The California Department of Health Services measured the strength of magnetic fields in the bedroom, family room, and kitchen and at the front door of some San Francisco Bay Area houses. Any appliances or electrical devices that were on at the time were left on. As shown in *table 2,* about half of the houses had an average magnetic field level below 0.71 milligauss (mG, the basic unit for measuring magnetic field strength), and 90% of homes had levels below 1.58 mG.

These are measures of the average strength of the 60 Hertz frequency magnetic field at a particular day and time. Field strengths vary with time, day and season depending on electricity use. For example, dinnertime readings are often higher than the middle of the night because appliances are in use. The other magnetic field components (like harmonics of other frequencies and short bursts of stronger fields called transients) are not included in these measurements, so they do not describe other aspects of the fields or other frequencies. Also, the field strength may change over time or distance depending on the location and type of its source.

Table 2. Distribution of average magnetic field strength of San Francisco Bay Area homes.

homes below average field strength	736 homes measured[1]
10%	0.43 mG
25%	0.54 mG
50%	0.71 mG
75%	0.98 mG
90%	1.58 mG

[1] Lee, G., California Exposure Assessment study (preliminary findings). California EMF Program. 1996.

Fairly simple measurements made by a trained technician can show the main indoor or outdoor sources of elevated magnetic fields in a home. Many utility companies and several private businesses can take these measurements. Taking measurements at different distances from powerlines can help show if the lines are sources for elevated magnetic fields inside a home. Turning off the house's main power switch will rule out sources caused by power use inside. In most cases it is possible to find and correct the source of elevated fields if they are due to faulty wiring, grounding problems or choice of lighting fixtures.

What are current government initiatives on EMF?

The State of California

The California Department of Education enacted regulations that require minimum distances between a *new school* and the edge of a transmission line "right-of-way," or the area immediately surrounding lines that utility companies need to access the lines for maintenance and repairs. The setback distances are 100 feet for 50-133 kV lines, 150 feet for 220-230 kV lines, and 350 feet for 500-550 kV lines. These distances were not based on specific biological evidence, but on the known fact that the strength of electric fields from powerlines drops to near background levels at the specified distances, given that no other major sources are present.

In 1993, the California Public Utilities Commission (CPUC) authorized the state's investor-owned utilities to carry out "no and low cost EMF avoidance and measures" in construction of new and upgraded utility projects. The CPUC also established our California EMF research, education, and technical assistance program under the guidance of the Department of Health Services. This program will provide information to assist those responsible for making public policy. However, at present the state of California has no formal rules or guidelines, but advocates "no and low cost" of EMF. This means minimizing EMF exposure when it is easy and inexpensive to do so. Right now there is not enough evidence to justify making regulations governing EMF.

The Federal Government

At the Federal level, the Federal Energy Policy Act of 1992 included a five-year program of electric and magnetic field (EMF) Research and Public Information Dissemination (EMF-RAPID). The EMF-RAPID Program asked these questions: Does exposure to EMF produced by power generation, trans-

mission, and use of electric energy pose a risk to human health? If so, how significant is the risk, who is at risk, and how can the risk be reduced?

In 1998, a working group of experts gathered by the EMF-RAPID Program met to review the research that has been done on the possible health risks associated with EMF. This group reviewed the studies that have been done on the subject, and then voted on whether they believed that exposure to EMF might be a health risk. They then published a report describing their findings. A majority of the scientists on this working group voted that the epidemiology studies of childhood leukemia provide enough evidence to classify EMF as a "possible human carcinogen." This means that, based on the evidence, these researchers believe that it is possible that EMF causes cancer, but they are not sure. They also decided that they did not have enough evidence to determine whether EMF exposure might cause other diseases.

The EMF-RAPID Program released its final report to Congress in 1999. This report explains the program's findings, including the results of its working group and many research projects. The final report states that "the NIEHS believes that there is weak evidence for possible health effects from [power frequency] ELF-EMF exposures, and until stronger evidence changes this opinion, inexpensive and safe reductions should be encouraged." (page 38) For more information on the EMF-RAPID program, or to look at these reports, contact the EMF-RAPID Program, National Institute of Environmental Health Sciences, National Institutes of Health, P.O. Box 12233, Research Triangle Park, North Carolina 27709, or visit their Web site at http://www.niehs.nih.gov/emfrapid. When ordering a copy of the final report, refer to the NIH publication number 99-4493.

Conclusion

Until we have more information, some communities and individuals are adopting the "no and low cost" avoidance strategy. It's easy to move an electric clock a few feet away from a bedside table, and it's simple to sit further away from the computer monitor. Table 1 above shows how quickly EMF decreases as you move away from an appliance. It almost disappears at distances of 3 to 5 feet. It is possible to take measurements in your home to identify sources of EMF, including faulty electrical wiring that can produce elevated magnetic fields and electrical shock. In California, the Public Utilities Commission requires investor-owned utilities to provide magnetic field measurements at no charge to their customers.

Contact us for a more detailed long factsheet. Please send us your questions and comments, too.

CALIFORNIA ELECTRIC AND MAGNETIC FIELDS PROGRAM
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World Health Organization

Summary of health effects of electromagnetic fields.

What happens when you are exposed to electromagnetic fields?

Exposure to electromagnetic fields is not a new phenomenon. However, during the 20th century, environmental exposure to man-made electromagnetic fields has been steadily increasing as growing electricity demand, ever-advancing technologies and changes in social behaviour have created more and more artificial sources. Everyone is exposed to a complex mix of weak electric and magnetic fields, both at home and at work, from the generation and transmission of electricity, domestic appliances and industrial equipment, to telecommunications and broadcasting.

Tiny electrical currents exist in the human body due to the chemical reactions that occur as part of the normal bodily functions, even in the absence of external electric fields. For example, nerves relay signals by transmitting electric impulses. Most biochemical reactions from digestion to brain activities go along with the rearrangement of charged particles. Even the heart is electrically active - an activity that your doctor can trace with the help of an electrocardiogram.

Low-frequency electric fields influence the human body just as they influence any other material made up of charged particles. When electric fields act on conductive materials, they influence the distribution of electric charges at their surface. They cause current to flow through the body to the ground.

Low-frequency magnetic fields induce circulating currents within the human body. The strength of these currents depends on the intensity of the outside magnetic field. If sufficiently large, these currents could cause stimulation of nerves and muscles or affect other biological processes.

Both electric and magnetic fields induce voltages and currents in the body but even directly beneath a high voltage transmission line, the induced currents are very small compared to thresholds for producing shock and other electrical effects.

Heating is the main biological effect of the electromagnetic fields of radiofrequency fields. In microwave ovens this fact is employed to warm up food. The levels of radiofrequency fields to which people are normally exposed are very much lower than those needed to produce significant heating. The heating effect of radiowaves forms the underlying basis for current guidelines. Scientists are also investigating the possibility that effects below the threshold level for body heating occur as a result of long-term exposure. To date, no adverse health effects from low level, long-term exposure to radiofrequency or power frequency fields have been confirmed, but scientists are actively continuing to research this area.

Biological effects or health effects? What is a health hazard?

Biological effects are measurable responses to a stimulus or to a change in the environment. These changes are not necessarily harmful to your health. For example, listening to music, reading a book, eating an apple or playing tennis will produce a range of biological effects. Nevertheless, none of these activities is expected to cause health effects. The body has sophisticated mechanisms to adjust to the many and varied influences we encounter in our environment. Ongoing change forms a normal part of our lives. But, of course, the body does not possess adequate compensation mechanisms for all biological effects. Changes that are irreversible and stress the system for long periods of time may constitute a health hazard.

An adverse health effect causes detectable impairment of the health of the exposed individual or of his or her offspring; a biological effect, on the other hand, may or may not result in an adverse health effect. ICNIRP guidelines

It is not disputed that electromagnetic fields above certain levels can trigger biological effects. Experiments with healthy volunteers indicate that short-term exposure at the levels present in the environment or in the home do not cause any apparent detrimental effects. Exposures to higher levels that might be harmful are restricted by national and international guidelines. The current debate is centred on whether long-term low level exposure can evoke biological responses and influence people's well being.

Widespread concerns for health

A look at the news headlines of recent years allows some insight into the various areas of public concern. Over the course of the past decade, numerous electromagnetic field sources have become the focus of health concerns, including power lines, microwave ovens, computer and TV screens, security devices, radars and most recently mobile phones and their base stations.

The International EMF Project

In response to growing public health concerns over possible health effects from exposure to an ever increasing number and diversity of electromagnetic field sources, in 1996 the World Health Organization (WHO) launched a large, multidisciplinary research effort. The International EMF Project brings together current knowledge and available resources of key international and national agencies and scientific institutions.

Conclusions from scientific research

In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research.

Effects on general health
Some members of the public have attributed a diffuse collection of symptoms to low levels of exposure to electromagnetic fields at home. Reported symptoms include headaches, anxiety, suicide and depression, nausea, fatigue and loss of libido. To date, scientific evidence does not support a link between these symptoms and exposure to electromagnetic fields. At least some of these health problems may be caused by noise or other factors in the environment, or by anxiety related to the presence of new technologies.

Effects on pregnancy outcome
Many different sources and exposures to electromagnetic fields in the living and working environment, including computer screens, water beds and electric blankets, radiofrequency welding machines, diathermy equipment and radar, have been evaluated by the WHO and other organizations. The overall weight of evidence shows that exposure to fields at typical environmental levels does not increase the risk of any adverse outcome such as spontaneous abortions, malformations, low birth weight, and congenital diseases. There have been occasional reports of associations between health problems and presumed exposure to electromagnetic fields, such as reports of prematurity and low birth weight in children of workers in the electronics industry, but these have not been regarded by the scientific community as being necessarily caused by the field exposures (as opposed to factors such as exposure to solvents).

Cataracts
General eye irritation and cataracts have sometimes been reported in workers exposed to high levels of radiofrequency and microwave radiation, but animal studies do not support the idea that such forms of eye damage can be produced at levels that are not thermally hazardous. There is no evidence that these effects occur at levels experienced by the general public.

Electromagnetic fields and cancer
Despite many studies, the evidence for any effect remains highly controversial. However, it is clear that if electromagnetic fields do have an effect on cancer, then any increase in risk will be extremely small. The results to date contain many inconsistencies, but no large increases in risk have been found for any cancer in children or adults.

A number of epidemiological studies suggest small increases in risk of childhood leukemia with exposure to low frequency magnetic fields in the home. However, scientists have not generally concluded that these results indicate a cause-effect relation between exposure to the fields and disease (as opposed to artifacts in the study or effects unrelated to field exposure). In part, this conclusion has been reached because animal and laboratory studies fail to demonstrate any reproducible effects that are consistent with the hypothesis that fields cause or promote cancer. Large-scale studies are currently underway in several countries and may help resolve these issues.

Electromagnetic hypersensitivity and depression
Some individuals report "hypersensitivity" to electric or magnetic fields. They ask whether aches and pains, headaches, depression, lethargy, sleeping disorders, and even convulsions and epileptic seizures could be associated with electromagnetic field exposure.

There is little scientific evidence to support the idea of electromagnetic hypersensitivity. Recent Scandinavian studies found that individuals do not show consistent reactions under properly controlled conditions of electromagnetic field exposure. Nor is there any accepted biological mechanism to explain hypersensitivity. Research on this subject is difficult because many other subjective responses may be involved, apart from direct effects of fields themselves. More studies are continuing on the subject.

The focus of current and future **research**

Much effort is currently being directed towards the study of electromagnetic fields in relation to cancer. Studies in search for possible carcinogenic (cancer-producing) effects of power frequency fields is continuing, although at a reduced level compared to that of the late 1990's.

The long-term health effects of mobile telephone use is another topic of much current research. No obvious adverse effect of exposure to low level radiofrequency fields has been discovered. However, given public concerns regarding the safety of cellular telephones, further research aims to determine whether any less obvious effects might occur at very low exposure levels.

Key points

1. A wide range of environmental influences causes biological effects. 'Biological effect' does not equal 'health hazard'. Special research is needed to identify and measure health hazards.
2. At low frequencies, external electric and magnetic fields induce small circulating currents within the body. In virtually all ordinary environments, the levels of induced currents inside the body are too small to produce obvious effects.
3. The main effect of radiofrequency electromagnetic fields is heating of body tissues.
4. There is no doubt that short-term exposure to very high levels of electromagnetic fields can be harmful to health. Current public concern focuses on possible long-term health effects caused by exposure to electromagnetic fields at levels below those required to trigger acute biological responses.
5. WHO's International EMF Project was launched to provide scientifically sound and objective answers to public concerns about possible hazards of low level electromagnetic fields.
6. Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.
7. The focus of international research is the investigation of possible links between cancer and electromagnetic fields, at power line and radiofrequencies.

(An excerpt from the World Health Organization, "About electromagnetic fields."
http://www.who.int/peh-emf/about/WhatisEMF/en/index.html)

Revised Budget for Phased RFID Implementation

2004-2005 - Year 1 of 6 year implementation plan

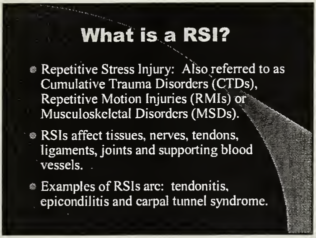
- Year 1 would only include items in Excelsior, Main Library AV Center & New materials purchased during the fiscal year
- Library budget would need to cover tags, labels, installation, training, maintenance & tax
- Gift funds would cover equipment for the Main Library
- Branch Capital Campaign funds would cover equipment for Excelsior
- Quotes were obtained from three vendors
- Current budget costs are based on the mid-range quote

Fund Source 2004/2005	Purpose	Cost
Library Budget	296,000 tags: Books/videos/audio @ .55	$162,800
	50,000 tags: DVD/CD @ $1.45	72,500
	346,000 items: Labels @ .04	13,840
	Installation of 8 stations @ $1,794	14,352
	Maintenance for 2 sites @ $3,000	6,000
	Training and miscellaneous	8,263
	Tax	22,244
	Total Library Budget Funds	*299,999*
Gift Funds – Main	2 Self-charge stations @ $9,000	$18,000
	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Main Gift Funds	*51,863*
Branch Capital Campaign	2 Self-charge stations @ $9,000	$18,000
Excelsior	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Branch Capital Campaign Funds	*51,863*
All sources – Total costs		**$403,725**

Revised Budget for Phased RFID Implementation
2004 – 2010

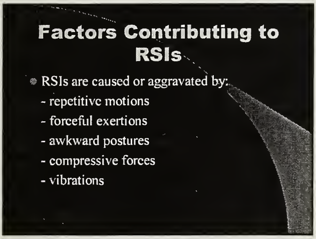
- Six year implementation plan based on bond schedule and POE schedule for the first floor of the Main Library

Fiscal Year	Purpose	Cost
2004/2005		
▪ Library Budget	346,000 tags, labels, etc.	$299,999
▪ Gift Funds	Main	51,863
▪ Branch Capital Campaign	Excelsior	51,863
▪ *Total Year One – All Sources*		*403,725*
2005/2006		
▪ Library Budget	270,000 tags, labels, etc.	$207,800
▪ Gift Funds	Main – POE	118,600
▪ Branch Capital Campaign	Glen Park, Sunset (2), Western Addition, Mission Bay, West Portal	256,800
▪ *Total Year Two – All Sources*		*583,200*
2006/2007		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Marina, Noe Valley, Eureka Valley, Portola, Ingleside, Park, Bernal Heights, Visitacion Valley	342,400
▪ *Total Year Three – All Sources*		*581,200*
2007/2008		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Oretga, Richmond (2), Potrero, Bayview, North Beach, Merced, Parkside	342,400
▪ *Total Year Four – All Sources*		*581,200*
2008/2009		
▪ Library Budget	270,000 tags, labels, etc.	$197,328
▪ Branch Capital Campaign	Anza, Golden Gate Valley, Presidio	128,400
▪ *Total Year Five – All Sources*		*325,728*
2009/2010		
▪ Library Budget	270,000 tags, labels, etc.	$202,710
▪ Library Budget	Chinatown (2), Mission, Oceanview	171,200
▪ *Total Year Six – All Sources*		*373,910*
Total – Library Budget		**1,556,637**
Total – Gift/Capital Campaign		**1,292,326**
Total – All Sources		**2,848,963**



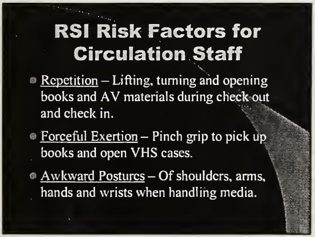
What is a RSI?

- Repetitive Stress Injury: Also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs).
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels.
- Examples of RSIs are: tendonitis, epicondilitis and carpal tunnel syndrome.



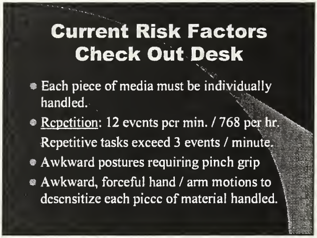
Factors Contributing to RSIs

- RSIs are caused or aggravated by:
  - repetitive motions
  - forceful exertions
  - awkward postures
  - compressive forces
  - vibrations



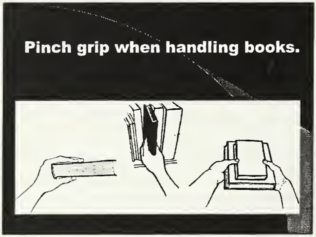
RSI Risk Factors for Circulation Staff

- Repetition – Lifting, turning and opening books and AV materials during check out and check in.
- Forceful Exertion – Pinch grip to pick up books and open VHS cases.
- Awkward Postures – Of shoulders, arms, hands and wrists when handling media.

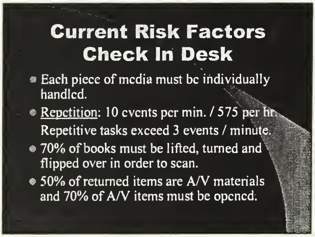


Current Risk Factors
Check Out Desk

- Each piece of media must be individually handled.
- Repetition: 12 events per min. / 768 per hr. Repetitive tasks exceed 3 events / minute.
- Awkward postures requiring pinch grip
- Awkward, forceful hand / arm motions to desensitize each piece of material handled.

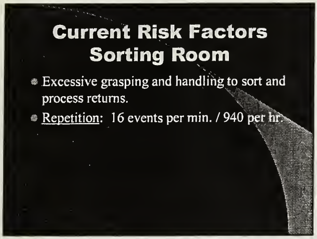


Pinch grip when handling books.



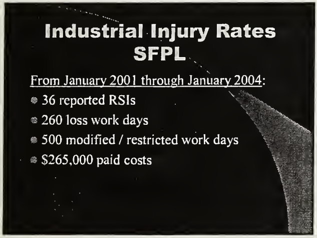
Current Risk Factors
Check In Desk

- Each piece of media must be individually handled.
- Repetition: 10 events per min. / 575 per hr. Repetitive tasks exceed 3 events / minute.
- 70% of books must be lifted, turned and flipped over in order to scan.
- 50% of returned items are A/V materials and 70% of A/V items must be opened.



Current Risk Factors Sorting Room

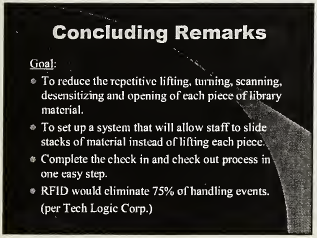
- Excessive grasping and handling to sort and process returns.
- Repetition: 16 events per min. / 940 per hr.



Industrial Injury Rates SFPL

From January 2001 through January 2004:

- 36 reported RSIs
- 260 loss work days
- 500 modified / restricted work days
- $265,000 paid costs



Concluding Remarks

Goal:

- To reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material.
- To set up a system that will allow staff to slide stacks of material instead of lifting each piece.
- Complete the check in and check out process in one easy step.
- RFID would eliminate 75% of handling events. (per Tech Logic Corp.)

RFID Technology and Reducing Risk Factors for RSI Injuries

RSI Definition

- Repetitive Stress Injuries also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs)
- RSIs are disorders of the musculoskeletal and nervous systems caused or aggravated by repetitive motions, forceful exertions, awkward posture and vibration or compressive forces (hard, sharp edges)
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels resulting in pain, tension and strains

General Risk Factors for RSIs among Circulation Staff:

- Repetition: Lifting, turning and opening books and AV materials during check-out and check-in
- Forceful exertion: Required pinch grip when picking up books and media and when opening and processing AV material
- Awkward postures of upper extremities (shoulders, arms, hands and wrists) when handling media

Specific Work Rates and Hazards at the Main Library*:

- Check-out Desk: Awkward postures and excessive handling requiring pinch grip and force to check-out items. Each piece of media must be individually handled. Workload: 12 events per minute/ 768 per hour (Highly repetitive when events exceed 3 per minute). Awkward and forceful hand/arm motions to desensitize material.
- Check-in Desk: Excessive grasping and handling to process returns. Each piece of media must be handled individually and 70% must be opened. 70% of books are being lifted, turned and flipped over in order to scan. Workload: 10 events per minute/ 575 per hour (Highly repetitive when events exceed 3 per minute)
- Sorting Room: Excessive grasping and handling to sort/process returns. Workload: 16 events per minute/ 940 per hour (Highly repetitive when events exceed 3 per minute)

Public Service Employees with Industrial Injuries:

- From January 2001 through January 2004 thirty-six (36) employees whose duties include public service have filed Worker's Compensation claims resulting in 260 loss work days; 500 modified/restricted work days; $265,000 paid costs

Summary:

- Goal is to reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material and to set up a system that will allow staff to slide material into place and have one motion for check-in and out (RFID).

*Ergonomic consultant report for 1st Floor Remodeling Project & Dept. of Public Health staff 3/02/04

March 29, 2004

TO: Library Commissioners
Susan Hildreth, City Librarian

FR: George Nichols, Finance Director

RE: 2004-05 BUDGET STATUS

On February 19, 2004, the Commission approved the Library's proposed budget of $88.408 million for 2004-05 (Attachment A). The Commission approved the budget with the understanding that increases for health and dental benefits and retirement had not been finalized and that additional changes would be made to the budget once costs were determined. Since the Commission's action, baseline adjustments made by the Controller related to health/dental, retirement, and other issues increased the Library's budget to $88.658 million, resulting in a deficit of $742,149.

Moreover, the Governor's proposed State budget includes a shift of $1.3 billion in statewide local property tax dollars to fund K-14 that could reduce discretionary General Fund (GF) in San Francisco by $54 million and subsequently, the Library's Charter required allocation of GF by $1.220 million. If the Governor's proposed ERAF[1] shift is approved by the Legislature, the Library's shortfall would grow to $1.962 million.

The outcome of the proposed shift will not be known until at least May when the Governor releases his May Revision; and, it may not be known until the Legislature adopts a budget later this summer. The Mayor's Budget Office has not issued instructions regarding contingency plans to cover the loss of revenue resulting from the ERAF shift; however, we must be prepared in case it is approved.

It must be noted, that the current budget and our balancing plan assumes no change in collective bargaining agreements. Our budget assumes that employees will continue to pay the 7.5% retirement; and, that no salary adjustments will be provided. Should either of these assumptions prove to be wrong, additional and more drastic reductions will be required.

To balance the budget, the Library has prepared:

1. A reduction plan to close the $742,000 gap that exists now; and,
2. A contingency reduction plan to cover the potential revenue loss of $1.220 million should the ERAF shift be approved.

The budget reduction plan and the contingency reduction plan are summarized on Attachment B. The underlying goals of both plans are to:

- Balance the budget without layoffs.
- Maintain critical baseline services and minimize impacts on public service.

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[1] **Educational Revenue Augmentation Fund (ERAF).**

- Provide a viable level of funding for deferred maintenance and computer replacement.

- Maintain and increase if possible, the baseline books and materials budget.

- If approved by the Commission, fund RFID implementation at a reduced level. Includes conversion of collections at Excelsior Branch Library and the Main Library A/V Center. First phase implementation would be funded at $300,000 from the LPF reserve fund.

Reduction Plan to Cover Baseline Cost Increases.

The $742,000 deficit results from the following adjustments made to the budget after it was approved by the Commission and submitted to the Mayor:

- Adoption by the Board of Directors of the San Francisco Retirement System (SFRS) of an employer retirement contribution rate of 4.48% for 2004-05[2]. The baseline budget provided by the Controller included a rate adjustment of 2.4% or $808,000. The 4.48% rate equates $1.506 million or $698,000 more than initially estimated.

- Increase to health/dental plans left unfunded in the budget approved by the Commission in anticipation of additional adjustments that would be made to the budget once all costs and revenue adjustments were known. The increase to health/dental benefits totaled $430,565.

- The Charter amendment enacted in November that established a City Services Auditor function in the Controller's Office. The ordinance requires the Controller to conduct financial auditing, performance auditing, best practice analysis, and special reviews; and, sets aside 0.2% of the budget to fund the program. The Library's assessment is $112,000.

- Actual costs calculated by the City's budget system for proposed new positions and substitutions or reclassifications; and, other miscellaneous system adjustments increased the budget by a net $9,437.

To balance the budget, the Library will withdraw or defer several new funding requests for a savings of $217,000; reduce funding for several new funding requests for a savings of $122,875; utilize accumulated fund balances remaining in a State ILL/DL account to fund a portion of the proposed increase to the book budget saving $259,000; and base budget reductions including a voluntary salary reduction of 15% by the City Librarian, miscellaneous baseline reductions and elimination of the Tool Lending Center grant for savings of $254,184. Specifically,

- Funding will be withdrawn for Millennium ILS upgrades ($60,000); Web Management Software ($10,000); purchase of a delivery truck ($49,000); recruitment materials and supplies ($5,000); roof inspections ($23,000); table repairs ($10,000); and repair of Park Branch stairs ($60,000).

- Funding will be reduced for computer replacements ($75,000); user placed reserves in the Branch system ($25,875); and A/V equipment replacement ($22,000).

- State grant balances from Interlibrary Loan and Direct Loan reimbursements received by the Library prior to 2002-03, will be used to fund $259,000 of the proposed $545,500 increase to the book

budget. Funds will be used specifically for opening day collections in the Branch System. This leaves $206,000 to permanently increase the base books & material budget and $80,000 to purchase books for the BLIP bookmobiles funded by Library Preservation Funds.

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[2] Per the Controller, the increase is due to the Retirement Fund's surplus funded status, lower than anticipated investment returns, and the phasing in of voter-approved retirement benefit increases that require the City to start making contributions. SFRS and the Controller are projecting that rates will increase to 6.48% and 8.48% in 2005-06 and 2006-07, respectively.

- Baseline reductions of $254,184. Includes voluntary 15% salary reduction by City Librarian ($23,252); elimination Tool Lending Center grant ($175,000); and other miscellaneous reductions ($55,932).

Contingency Plan for Loss of $1.2 million General Fund Revenue (ERAF)

Should the Legislature approve the Governor's proposed shift of property tax dollars to K-14, the Library will face an additional shortfall of $1.220 million. To cover the additional shortfall, the Library would withdraw additional new funding requests, make further reductions to new funding requests that remain, make additional cuts in baseline programs, and utilize the LPF reserve to cover the remaining need and mitigate the need to make deep cuts in baseline programs in 2004-05. As currently proposed by the Governor, the ERAF shift would be a permanent realignment of local property tax dollars resulting in an ongoing reduction of GF allocations made to the Library.

Specifically, the Library will:

- Withdraw remaining funds for reserve processing for Branch Libraries ($25,875) and audio-visual equipment replacement ($22,000) for additional savings of $47,875.

- Reduce funding for a full-time Delivery Driver position to a half-time position, saving an additional $25,224.

- Further reduce funding for PC and workstation replacement from $225,000 to $200,000 for additional savings of $25,000.

- Withdraw funds to increase the base books and materials budget for additional savings of $206,000. Budget would still provide $259,000 from ILL/DL reimbursements for opening day collections and $80,500 for the two Branch Library Improvement Program bookmobiles.

- Make additional baseline program cuts for savings of $132,368.

- Use $534,624 from the LPF reserve to cover remaining need and mitigate the need to make deeper baseline program cuts in 2004-05.

Impact of Proposed Balancing Plans on Library Preservation Fund Reserve

The LPF reserve currently has a balance of $2.249 million[3]. To offset the $742,000 deficit caused by additional baseline adjustments made by the Mayor and the Controller, the Library is not using LPF reserve funds. In fact, due to reductions to baseline and new funding proposals that exceed the shortfall, the Library will actually reduce spending from the reserve by $110,000. The Library would use $912,000 from the reserve (reduced from $1.022 million) to support its Capital Improvement Program leaving a balance of $1.336 million (2.5%). Of the $912,000 – $901,426 is for the Main Library POE project and $10,434 is for Deferred Maintenance. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.212 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $1.037 million (1.9%).

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[3] The reserve balance is expected to increase by year-end due to a projected increase in local revenue allocable to the Library under the Charter requirement as reported in the Controller's "FY 2003-04 Six-Month Budget Status Report" issued on February 9, 2004; and, current year appropriation savings a portion of which are credited to the LPF.

To cover the deficit resulting from additional baseline increases and the loss of revenue should the Governor's proposed ERAF shift be approved, the Library in addition to the budget cuts described above, would use a total $1.616 million from the LPF reserve leaving a balance of $632,523 (1.2%). Of the $1.616 million, $901,426 is for the Main Library POE project, $180,000 is for Deferred Maintenance, and $534,624 is to cover the shortfall that remains after making the budget cuts described above. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.916 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $332,523 (0.6%).

The Contingency Reduction Plan requires the use of additional LPF reserves to mitigate the need for deep program cuts in 2004-05. Although, the reserve balance will be seriously depleted if the ERAF shift is approved, the Library would be able to maintain core and mission-critical public services in 2004-05 with minimal loss of jobs and no layoffs. The use of LPF reserves to support the Library's baseline operations is a short-term measure to minimize baseline cuts next year – one of the principal reasons we have labored to maintain a prudent reserve. The impact to the LPF reserve is illustrated on Attachment C.

System-wide Budget Review

In conjunction with the short-term plans to balance the 2004-05 budget, the Library needs to proactively plan for a future that could include further revenue loss (local and state) and more significantly, further growth in baseline costs.[4] During 2004-05, the Library will conduct a comprehensive review of all Library services and programs. The goal of this system-wide review is to look for opportunities to reduce costs by eliminating or reducing non-core programs; to reduce staffing levels through reorganization, consolidation, and redeployment; and to develop a contingency reduction plan for 2005-06. In reducing staffing levels, our goal would be to eliminate positions (vacant) and not people. As stated, cost reductions will probably be necessary to mitigate further erosion in our revenue base; and more significantly, to offset increases in salaries, benefits, work comp, and other baseline costs that are likely in 2005-06.

Given the economic uncertainties and the prospects of City-wide growth in baseline expenditures (i.e., employee compensation), it is not likely that the Library will be allocated General Fund dollars beyond amounts required by the Charter. Consequently, it will be incumbent on the Library and the Commission to conduct this review and to proactively plan for the challenging times that lay ahead.

cc: Paul Underwood, Deputy City Librarian

Attachments

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[4] The Library's employee health/dental plan costs have grown by more than $835,000 ($404,000 in 2003-04 and $431,000 in 2004-05); Worker's Compensation direct costs have increased $426,000 since 2001-02; from $379,000 in 01-02 to a projected $805,000 in 04-05; Retirement costs will increase by $1.5 million in 2004-05. The Controller, the Mayor's Budget Director, and the BoS Budget Analyst in their report to the Mayor titled, "Three-Year General Fund Budget Projection, FY 2004-05 through 2006-07" dated March 19, 2004 project health benefits to increase 15.5% per year in 05-06 and 06-07; retirement contribution to increase 2% per year in 05-06 and 06-07; and worker's compensation to increase significantly in 05-06 and 06-07. Moreover, collective bargaining will significantly impact the budget in the near future. Unions may negotiate restoration of some if not all of the 7.5% retirement that members picked-up in 2003-04 (up to $2.5 million impact); and, salary adjustments could become an issue as no increase was provided in 2003-04. If no increase is provided in 2004-05, increasing salaries could become a major issue and a significant cost.

3/30/2004

Public Library
2004-05 Proposed Budget

	Operating	Capital	Other	Total
USES				
2003-04 AAO	**$ 54,476,188**	**$ 1,118,652**	**$ 1,287,000**	**$ 56,881,840**
One-time	$ (1,112,808)	$ (1,118,652)	$ (1,287,000)	$ (3,518,460)
Retirement Contribution	$ 808,167			$ 808,167
Unemployment	$ 76,278			$ 76,278
Misc. Salary & Fringe Adjustments	$ (10,943)			$ (10,943)
Annualized FTE	$ 66,994			$ 66,994
State Grant (Project Read)	$ 2,619			$ 2,619
Gift Reduction (PIO)	$ (33,377)			$ (33,377)
Substitutions	$ 37,621			$ 37,621
Lease Increases	$ 3,485			$ 3,485
Work Order Changes	$ 127,489	$ -	$ -	$ 127,489
Subtotal Baseline Changes	**$ (34,475)**	**$ (1,118,652)**	**$ (1,287,000)**	**$ (2,440,127)**
Revised Baseline (BPREP)	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Health Benefits (pending)	$ -	$ -	$ -	$ -
Estimated Baseline	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Policy Changes (Attachment A)	$ 1,243,826	$ 31,722,081	$ -	$ 32,965,907
Total Proposed Budget	**$ 55,685,539**	**$ 31,722,081**	**$ -**	**$ 87,407,620**
SOURCES				
LPF & Other Operating Revenue	$ 56,198,600	$ 248,692	$ -	$ 56,447,292
LPF Reserve	$ -	$ 1,022,734		$ 1,022,734
Library Improvement Fund	$ -	$ 1,450,655		$ 1,450,655
Branch Library Improvement Bonds	$ -	$ 29,000,000		$ 29,000,000
Total Sources	**$ 56,198,600**	**$ 31,722,081**	**$ -**	**$ 87,920,681**
Sources less Uses	$ 513,061	$ -	$ -	$ 513,061

Note: Budget does not reflect increases in Health Plan premiums which are estimated at 15% or $644,000. Costs will be added to the budget by the Mayor/Controller, once actuals are determined in March/April.

3/30/2004

Public Library
2004-05 Proposed Budget

Attachment B

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
Sources/Revenue	$ 87,916,131	$ (1,220,000)	$ 86,696,131
Budget/Expenditures	$ 88,658,280	$ -	$ 88,658,280
Deficit	$ (742,149)	$ (1,220,000)	$ (1,962,149)
Baseline Cuts	$ 254,184	$ 132,368	$ 386,552
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
Reduce training funds (Admin - HR)	$ 11,880	$ -	$ 11,880
Eliminate access to RLIN bibliographic utility (Techn Srvcs).	$ 600	$ -	$ 600
Reduce funds budgeted for data processing supplies (Info Technology).	$ 20,000	$ -	$ 20,000
Eliminate small equipment (burster) maintenance funds (Techn Srvcs).	$ 1,152	$ -	$ 1,152
Innovacq maintenance service funds (Techn Srvcs).	$ -	$ 20,576	$ 20,576
Eliminate half-time 1630 Acct. Clerk (Admin - FO)	$ -	$ 26,780	$ 26,780
Eliminate 15 hr/week 3602 Page - Borrower Services (Main)	$ -	$ 12,012	$ 12,012
Eliminate half-time Library PageMain's Childrens' Center (OCYS)	$ -	$ 21,000	$ 21,000
Reduce materials & supplies budget (Admin - CL).	$ -	$ 3,000	$ 3,000
Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Budget Change Proposals (New Spending)	$ 598,874	$ 442,099	$ 1,040,973
Book Budget	$ 259,000	$ 206,000	$ 465,000
Technology Refreshement	$ 75,000	$ 25,000	$ 100,000
Coldfusion WEB Software	$ 10,000	$ -	$ 10,000
III Millennium Enhancements	$ 60,000	$ -	$ 60,000
Reserve processing (4 HT 3602)	$ 25,874	$ 25,875	$ 51,749
Deferred Maintenance Program	$ -	$ 70,000	$ 70,000
Delivery Truck Driver	$ -	$ 25,224	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ -	$ 49,000
Audio-Visual Equipment	$ 22,000	$ 22,000	$ 44,000
Elevator Maintenance Services	$ -	$ -	$ -
M&S for recruitment (HR).	$ 5,000	$ -	$ 5,000
Roof Inspections	$ 23,000	$ -	$ 23,000
Refinish vandalized wooden tables	$ 10,000	$ -	$ 10,000
M&S OCYS	$ -	$ 8,000	$ 8,000
Main Library windows	$ -	$ 60,000	$ 60,000
Park front stairs	$ 60,000	$ -	$ 60,000
Convert .50 1022 to 1.0	$ -	$ -	$ -
Add .25 3618 (Main)	$ -	$ -	$ -
Library Preservation Fund Reserve	$ (110,909)	$ 645,534	$ 534,625

ESTIMATED REVISED 2004-05 BUDGET			
Sources/Revenue	$ 87,805,222	$ (574,467)	$ 87,230,756
Budget/Expenditures	$ 87,805,222	$ (574,467)	$ 87,230,756
Deficit	$ -	$ -	$ -

FLN=Attachments B and C (4-1-04 Commission Report)(Attachment B)

3/30/2004

Attachment C

Public Library
Proposed 2004-05 Budget
Library Preservation Fund Reserve

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
LPF Reserve Balance (1/23/04)	$ 2,248,572	$ 2,248,572	$ -
Main Library POE	$ (901,426)	$ (901,426)	$ -
Deferred Maintenance	$ (10,434)	$ (180,000)	$ (169,566)
Remaining Base Deficiency (Fund from LPF Reserve)	$ -	$ (534,625)	$ (534,625)
Remaining Balance	$ 1,336,712	$ 632,522	$ (704,191)
RFID	$ (300,000)	$ (300,000)	$ -
Remaining Balance	$ 1,036,712	$ 332,522	$ (704,191)
	1.9%	0.6%	

Pu Library
2004-05 Proposed Budget
Budget Change Proposals (New Funding Initiatives)

	Budgeted	Reduction Plan	Contingency Reductions	Total Reductions	Balance
Book Budget	$ 545,500	$ (259,000)	$ (206,000)	$ (466,000)	$ 80,500
Technology Refreshement	$ 300,000	$ (75,000)	$ (25,000)	$ (100,000)	$ 200,000
Coldfusion WEB Software	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
III Millennium Enhancements	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
Reserve processing (4 HT 3602)	$ 51,749	$ (25,874)	$ (25,875)	$ (51,749)	$ -
Deferred Maintenance Program	$ 200,000	$ -	$ (70,000)	$ (70,000)	$ 130,000
Delivery Truck Driver	$ 50,448	$ -	$ (25,224)	$ (25,224)	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ (49,000)	$ -	$ (49,000)	$ -
Audio-Visual Equipment	$ 44,000	$ (22,000)	$ (22,000)	$ (44,000)	$ -
Elevator Maintenance Services	$ 70,000	$ -	$ -	$ -	$ 70,000
M&S for recruitment (HR).	$ 5,000	$ (5,000)	$ -	$ (5,000)	$ -
Roof Inspections	$ 23,000	$ (23,000)	$ -	$ (23,000)	$ -
Refinish vandalized wooden tables	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
M&S OCYS	$ 8,000	$ -	$ (8,000)	$ (8,000)	$ -
Main Library windows	$ 110,000	$ -	$ (60,000)	$ (60,000)	$ 50,000
Park front stairs	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
TOTAL	**$ 1,596,697**	**$ (598,874)**	**$ (442,099)**	**$ (1,040,973)**	**$ 555,724**

4/1/2004

Chart 2

Public Library
2004-05 Proposed Budget
Base Budget Reductions

	Reduction Plan	Contingency Reductions	Total
Baseline Cuts			
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
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Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Total	**$ 254,184**	**$ 132,368**	**$ 386,552**

FLN=Charts 1 & 2 (4-1-04)(Chart 2)

Susan Hildreth

From: Marcia Schneider
Sent: Friday, March 19, 2004 5:26 PM
To: Susan Hildreth
Subject: FW: History Detectives to shoot here

Susan - FYI.

-----Original Message-----
From: Susan Goldstein
Sent: Friday, March 19, 2004 4:56 PM
To: Tim Wilson; Andrea Grimes; Asa Peavy; Christina Moretta; Elise Wong; Greg Kelly; Jason Baxter; John Eby; Katherine Henry; Mireya Ajoy Wan; Pat Akre; Robert Harrison; Susan Goldstein; Susie Taylor; Tami Suzuki; Thomas Carey
Cc: John Kenny; Kathy Lawhun; Gabrielle Jones; Marcia Schneider
Subject: History Detectives to shoot here

History Detectives, that wonderful PBS show that visits archives and libraries, trying to resolve historical mysteries and inaccuracies, will be shooting in the San Francisco History Center next Wednesday, from 1-5pm. They will be shooting from an 1859 volume of the San Francisco Bulletin for an episode on the Broderick-Terry duel.

3/24

Their crew will consist of 5 people (producer, co-producer, host, camera, and sound people), along with lights, sound and audio equipment. They do need to have the host do some voice-overs during this shoot, so some patrons may be irritated by the noise. I propose that we consider shooting in Book Arts, if it is quiet that day, or we send irritated patrons back to Book Arts for a quieter environment for the duration of the shoot.

Ultimately, however, I think it's fantastic we'll be featured on this show. They just shot an episode at the Bancroft, and they'll be shooting at Society of California Pioneers that morning before they visit us. It's a great show (I'm a fan!) and good exposure for us. Thanks to Tom Carey who assisted them with their initial research here.

Susan Goldstein
City Archivist
San Francisco History Center
San Francisco Public Library
100 Larkin Street
San Francisco, CA 94102
415.557.4567
http://sfpl.org

APRIL 2004 -- FEATURED PROGRAMS AT THE SAN FRANCISCO PUBLIC LIBRARY

+ + + + + + + + + +

April is National Poetry Month. Throughout the month of April the San Francisco Public Library celebrates National Poetry Month with many exciting programs that emphasize the importance of poetry in American culture. For a complete listing of poetry programs at the Library this month, check *At the Public Library.*

+ + + + + + + + + +

1 APRIL, THURSDAY,

French Kiss: Our Enduring Love Affair with France -
Selections from the Schmulowitz Collection of Wit and Humor - An exploration of two hundred years of lively and humorous views of France. Since the eighteenth century, France has been the object of great interest by American writers, humorists and artists who have crossed the Atlantic to write about their experiences, influences and tender attachments; to give tribute to French culture (sometimes grudgingly so) or to write about the quirky confounded nature of the people, known for their liberté, egalité and fraternité.

Exhibition: From April 1 (April Fool's Day!) through July 31, 2004, Main Library, Sixth Floor, Skylight Gallery

+ + + + + + + + + +

3 APRIL, SATURDAY
Ca Dao Vietnam: Vietnamese Folk Poetry-
Poet and translator John Balaban and singer Le Pham Le read and sing Vietnamese folk poetry in the ca dao tradition. Book sale by Book Bay at the Main.

Main Library, Lower Level, Koret Auditorium, 2:00 - 3:00 p.m.

+ + + + + + + + + +

4 April, Sunday
Celebrating the 10th Anniversary of the Democratic Elections in South Africa-
Featuring local activists and speakers. This program also commemorates 35 years since the assassination of Dr. Martin Luther King, Jr.

Main Library, Lower Level, Koret Auditorium, 2:30 p.m.

+ + + + + + + + + +

6 APRIL, TUESDAY
City Reflections: War & Peace on Our Streets -
Join us for the culminating event of San Francisco poet laureate devorah major's project. devorah, Gail Mitchell, Leticia Hernandez, Matthew Shenoda and Dan Bellm read their poetry about San Francisco neighborhoods.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 5:30 - 8:00 p.m.

Related Exhibition: City Reflections - War & Peace on Our Streets A culmination of San Francisco poet laureate devorah major's project City Reflections: War and Peace on our Streets featuring the poetry and poets connected to the project. Through April 30, 2004, Main Library, Sixth Floor

+ + + + + + + + + +

10 APRIL, SATURDAY
Reversing Vandalism: The Art of Altered Books -
Discover the history of this art form with Steve Woodall, artistic director of the San Francisco Center for the Book. Artists Sandra Ortiz Taylor and Mary Marsh show their artistic methodology and artwork.

Main Library, Lower Level, Koret Auditorium, 1:00 - 2:30 p.m.

+ + + + + + + + + +

21 APRIL, WEDNESDAY
Radar Reading -
Featuring Margo Perrin, Cooper Lee Bombardier and Sparow 13 Laughingwand. Hosted by poetry diva Michelle Tea.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 6:00 p.m.

21 APRIL, WEDNESDAY
Fists on Fire - Poet Jack Hirschman Reads. The author of more than 50 volumes of poetry, essays and translations, his impassioned readings challenge his audience and the American system in which we live.
North Beach Branch, 7:00 p.m.

+ + + + + + + + + +

22 APRIL, THURSDAY
Celebrating Contemporary American Poets -
In celebration of National Poetry Month. Photographer and scholar Lynda Koolish discusses the lives of the Beat writers, poets of the Black Arts movement and writers with other contemporary literary movements.

Main Library, Lower Level, Koret Auditorium, 6:30 p.m.

The 8th Annual Effie Lee Morris Lecture. Does the World Need Another Book? With Nikki Grimes, 2003 Coretta Scott King Book Award Winner.

Main Library, Koret Auditorium, 2:00 p.m.

FOR IMMEDIATE RELEASE
April 1, 2004

CONTACT: Sarah Dalton
916/654-1483

State Librarian of California, Dr. Kevin Starr Retires April 1, 2004

SACRAMENTO – Effective today, April 1, 2004, Dr. Kevin Starr is retiring as State Librarian of California after ten years of service at the California State Library.

Commenting on his tenure at the California State Library, Starr says, "For the past decade, it has been my honor and privilege to serve the people of California through librarianship. In the ten years that I've been State Librarian, I've tried to increase the visibility of the California State Library and the public libraries of California as these institutions serve the people and the heritage of our great state."

Governor Arnold Schwarzenegger has named Starr "State Librarian Emeritus." Governor Schwarzenegger says in an official proclamation to Starr that

> "Your commitment to our state has earned you the respect and deep appreciation of your students, colleagues and fellow Californians. Therefore, it is my distinct honor to bestow on you the title of State Librarian Emeritus."

Starr said it has been his "pleasure to work with Governor Schwarzenegger and First Lady Maria Shriver." "As brief as our relationship has been," Starr says, "I am convinced that they will each find a place of honor in the history of our great state."

About his plans for the future, Starr says he will teach full-time at the University of Southern California, Department of History. Starr reports "three books under contract, one of which will complete my *Americans in the California Dream* series."

Biographical Sketch of Dr. Kevin Starr:

Kevin Starr is the seventh State Librarian of California since 1900. After graduation from the University of San Francisco in 1962, Starr served two years as a lieutenant in a tank battalion in Germany. Upon release from the service, Starr entered Harvard University where he took his MA degree in 1965 and his PhD in 1969 in American Literature. He also holds the Master of Library Science degree from UC Berkeley and has done post-doctoral work at the Graduate Theological Union. Starr has served as the City Librarian of San Francisco.

Starr currently holds the rank of University Professor at the University of Southern California in Los Angeles and, is a contributing editor to the Opinion section of the Los Angeles Times. The author of numerous newspaper and magazine articles, Starr has written ten books, six of which are part of his Americans and the California Dream series. His writing has won him a Guggenheim Fellowship, membership in the Society of American Historians, and the Gold Medal of the Commonwealth Club of California.

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DRAF

DOCUMENTS DEP
MAY 28 2004
SAN FRANCISCO
PUBLIC LIBRARY

San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

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Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
missioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Revised draft Minutes of the regular meeting of Thursday, April 1, 2004
The San Francisco Public Library Commission held a regular meeting on Thursday, April 1, 2004 in the Koret Auditorium, Main Library.

The meeting was called to order at 4:20pm.

The following members were present: Commissioners Chin, Coulter, Higueras, and Streets.
Commissioners Steiman and Strobin were excused attendance.
Commissioner Bautista joined the meeting at 5:14pm.

President Higueras announced that the taking of agenda items would be re-ordered so that the RFID Recommendation and the Library Budget items would be heard before the City Librarian's report.

AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public discussed the Board of Supervisors Rules Committee meeting.
Mr. Peter Warfield commented on the Rules Committee meeting, and his Library RSI injuries reports request.
Ms. Deetje Boler spoke about book collection loss replacement, and RFID costs

AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

Public comment on AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

An anonymous member of the public described the Minutes as an "April Fool's" joke.
Mr. Peter Warfield commented on the Minutes lack of detail of comments and discussion.

COMMISSION discussion of AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

MOTION: by Commissioner Chin, 2nd Commissioner Streets for approval of the Minutes of the regular meeting of March 4, 2004.

Approved by the following vote:

ACTION: 4-0 AYE (Chin, Coulter, Higueras, and Streets)

AGENDA ITEM #4 RFID RECOMMENDATION (taken out of order as previously announced)

Presentation on and discussion of use of a Radio Frequency Identification (RFID) system in the Library in order to reduce workplace injuries and enhance Library operations, and possible action to approve acquisition of RFID-based technology to replace existing barcode based circulation and magnetic security systems, subject to adoption of suitable criteria and policies to protect user privacy.

(Presentations were made by Kathy Lawhun, Chief of the Main Library, and San Francisco Department of Public Health Occupational Health and Safety experts Karen Peckman and Nancy Terranova and by Deputy City Librarian Paul Underwood (copies attached). Materials for these presentations were prepared with the assistance of the Library's RFID Task Force - Kathy Lawhun, Donna Corbeil, David Dodd, David Dale, and Terry Gwiazdowski)

Public comment on AGENDA ITEM #4 RFID RECOMMENDATION

Anonymous member of the public suggested that gift funded portions of the RFID budget could derive from industry sources.
Mr. Peter Warfield opposed to RFID implementation, and found the documentation and policies inadequate.
Ms. Ann Brick, ACLU, opposed implementation and termed an independent review crucial.
Mr. David Molnar clarified his March 4th presentation on RFID.
Mr. Lee Tien, EFF, opposed to RFID implementation, citing potential problems with new technologies.
Ms. Deetje Boler opposed to RFID implementation, and urged consideration of the Precautionary Principle.
Mr. Eric Epson found concerns with RFID privacy risk unrealistic, thinking database security more important.

Commission discussion of AGENDA ITEM #3 RFID RECOMMENDATION

The consensus of the Commission was that staff should prepare additional background materials addressing: various aspects of how RFID would to be implemented by the San Francisco Public Library including consideration of ongoing costs of RSI injuries and loss of collection materials; and policies regarding its use that would need clarification prior to implementation. The City Librarian proposed to provide additional information and bring this item back for Commission action at its May 6th meeting.

A recess was called at 5:34pm
The Public Library Commission returned to session at 5:44pm

President Higueras left the meeting during the recess.

AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An update report on the Library's proposed 2004/05 Budget.

(Library Finance Director George Nichols presented an update report on the overall City and state budget and revenue situation and discussed various contingency budget reduction plans as changes resulting in revenue losses or increased costs to the Library that have or will occur).

Public comment on AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An anonymous member of the public noted that terms used in the report hampered understanding.
Mr. Peter Warfield expressed concerned with priorities for cuts, recommending that the book budget be last to cut.

Commission discussion of AGENDA ITEM #4 2004/05 LIBRARY BUDGET

The Commissioners voiced concern that ongoing preventative maintenance be continued when possible and raised questions concerning the long-term impact of increasing personnel costs on future budgets.

AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

The City Librarian reported on the following subjects: a hearing about creation of Board appointed library advisory committee at the Board of Supervisor's Rules Committee; Dr. Starr's retirement as State Librarian; reduction in the available funds for Prop 14 (State Library Bond) Cycle 3 grants from $90 to $77 million; a report on PBS History Detectives filming in the San Francisco History center, and programs and exhibits.

Public comment on AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

An anonymous member of the public commented on Prop 14, and Dr. Starr's retirement.

AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

Martín Gómez, Executive Director of the Friends of the Library reported on: the 8th Annual Library Laureates Dinner on April 30; concerning their approval of a $42, 500 grant to fund the Library's 125th Anniversary activities; and consideration of $900,000 in grant requests submitted by library staff for 2004/05.

Public comment on AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

(None offered)

AGENDA ITEM #7 LABOR UNION REPORT

(No report offered)

AGENDA ITEM #8 NEW BUSINESS

(No items were proposed)

AGENDA ITEM #9 ADJOURNMENT

MOTION: by Commissioner Bautista, 2nd Commissioner Chin that the meeting be adjourned.

Approved by the following vote:
4-0 AYE (Bautista, Chin, Coulter, and Streets)

There being no further business, at the hour of 7:17pm the Public Library Commission adjourned.

Michael Housh, Commission Secretary 4/5/04

Please note: These are draft minutes subject to change by the Library Commission. Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS to the April 1, 2004 Minutes:

Privacy Policy;
Implementation Plan;
Request for Proposals;
CA Factsheet on EMF (PDF);
RFID & Health Bibliography;
Fast Facts
2004/05 Budget;
April 1, 2004 Report;
Budget Attachments B & C

The City Librarian's Report

Minutes of the regular Commission Meeting of April 1, 2004

Appendix A

Library Commission meeting of March 4, 2004

The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16..

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.

The number of members of the public who spoke anonymously at this meeting. 1

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004
RFID and Health Bibliography

Health and Safety
Organizations

- Amateur Radio RF Safety Calculator. http://n5xu.ae.utexas.edu/rfsafety/
- California Electric and Magnetic Fields Program (Part of the California Department of Health, Environmental Health Investigations Branch.) http://www.dhs.ca.gov/ps/deodc/ehib/emf/
- EMR Network. http://www.emrnetwork.org/
- Federal Communications Commission, Office of Engineering and Technology. Radio Frequency Safety. http://www.fcc.gov/oet/rfsafety/
- International Commission on Non-Ionizing Radiation Protection. http://www.icnirp.org/
- Pacific Gas & Electric, Understanding Electric and Magnetic Fields website. http://www.pge.com/education_training/about_energy/emf/
- San Francisco Neighborhood Antenna-Free Union (SNAFU). http://www.antennafreeunion.org/
- Sutro Tower Community Perspectives. http://www.sutro.org/
- National Institute of Environmental Health Sciences, EMF RAPID (Electric and Magnetic Fields Research and Public Information Dissemination Program) website: http://www.niehs.nih.gov/emfrapid/home.htm
- UC Berkeley Communication and Network Services Radio Frequency Safety. http://radio.cns.berkeley.edu/safety/rf-safety.shtml
- United States Department of Labor, Occupational Safety and Health Administration. Non-Ionizing Radiation: Radiofrequency and Microwave Radiation. http://www.osha.gov/SLTC/radiofrequencyradiation/
- World Health Organization, Electromagnetic Fields. http://www.who.int/peh-emf/en/

Articles and Reports

- About Electromagnetic Fields. World Health Organization online. http://www.who.int/peh-emf/about/en/
- David Banas, "Employee exposure to high level radio frequency radiation." Applied Occupational and Environmental Hygiene, March 17, 2002. http://www.metapress.com/media/99a0hcpddf6qtj914q0x/Contributions/9/W/4/V/9W4VF6U33Y8GLKRF.pdf
- C-K. Chow and J. A. D'Andrea. "Reviews of effects of RF fields on various aspects of human health: Introduction." Bioelectromagnetics, Supplement 6, 2003.
- Robert F. Cleveland, Jr. and Jerry L. Ulcek, "Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields." Federal Communications Commission Office of Engineering and Technology: OET Bulletin 56, August 1999.

http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

- J. Mark Elwood. “Epidemiological studies of radio frequency exposures and human cancer.” Bioelectromagnetics, Supplement 6, 2003.
- Brigitta Floderus, Carin Stenlund and Frank Carlgren. “Occupational exposures to high frequency electromagnetic fields in the intermediate range (>300 Hz – 10 MHz).” Bioelectromagnetics, December 2002.
- Kenneth R. Foster, Paolo Vecchia and Michael H. Repacholi, “Risk Management. Science and the precautionary principle.” Science, May 12, 2000.
- Frequently Asked Questions about the safety of radiofrequency (RF) and microwave emissions from transmitters and facilities regulated by the FCC. http://www.fcc.gov/oet/rfsafety/rf-faqs.html
- International EMF Project, Fact Sheets and Backgrounders. (Part of the World Health Organization website) http://www.who.int/docstore/peh-emf/publications/facts_press/fact_english.htm
- Norbert Leitgeb and Jorg Schrottner. “Electrosensibility and electromagnetic hypersensitivity.” Bioelectromagnetics, September 2003.
- John M. Osepchuk and Ronald C. Petersen. “Historical review of RF exposure standards and the International Committee of Electomagnetic Safety (ICES). Bioelectromagnetics, Supplement 6, 2003.
- “Possible Health Risks to the General Public from the Use of Security and Similar Devices: Executive Summary.” Quality of Life, European Commission, [2002]. http://www.icnirp.de/documents/ExSummary.pdf
- Eric van Rongen, et al. “Mobile phones and children: Is precaution warranted?” Bioelectromagnetics, February 2004.
- “Short Factsheet on EMF.” California Electric and Magnetic Fields Program, 1999. http://www.dhs.ca.gov/ps/deodc/ehib/emf/shortfactsheet.PDF
- Caroline White, “Risk of Cancer from mobile phones is unclear.” British Medical Journal, January 17, 2004. http://bmj.bmjjournals.com/cgi/reprint/328/7432/124-b

3/31/04

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004
Fast Facts about RFID and EMF

- RFID stands for radio frequency identification.
- EMF stands for electromagnetic fields.
- Radio frequency is a type of electromagnetic field made of radio waves.
- Electromagnetic fields are made of electric and magnetic fields.
- Electromagnetic fields are present everywhere on the earth.
- Sources of electromagnetic fields include the sun, thunderstorms, household appliances, cellular phones, and more.
- Electromagnetic fields are defined by their frequency and their wavelength.
- Wavelength refers to the distance between one wave and the next.
- Frequency refers to the number of times the energy vibrates or oscillates.
- The unit of measurement of an electric field is volts per meter (V/m)
- The unit of measurement of a magnetic field is a gauss in the USA and a tesla in Europe.
- The unit of measurement for frequency is a hertz. One hertz is one cycle per second (1 Hz). 1 kHz (kilohertz) is one thousand cycles per second. 1 MHz (megahertz) is one million cycles per second. 1 GHz (gigahertz) is one billion cycles per second.
- Radio frequency constitutes one part of the electromagnetic field range.
- The frequency range of electromagnetic fields runs from 1 Hz-300 GHz).
- The frequency of the RFID tags that SFPL will use is 13.56 MHz.

SAN FRANCISCO PUBLIC LIBRARY
PRIVACY POLICY

Policy Outline

I. Opening statements
- Confidentiality of records
- Intellectual freedom
- Personal information the library collects and does not collect
- Library records protected under California Government Code

II. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT ACT)
- General information
- Sections 214-216 pertaining to libraries and book stores

III. San Francisco's Response to the USA PATRIOT ACT
- Board of Supervisor's resolution
- Library Commission resolution
- Proposition E, passed by voters March 2, 2004

IV. Public computers
- Computer reservation system and access
- Search stations programmed to delete booking history

V. Computer searching
- Variety of search alternatives
- Users prohibited from searching by barcode

VI. Email and Web forms
- Reference questions, regardless of format of transmission, treated with confidentiality
- Email not necessarily secure against interception and disclosure

VII. Links to other sites
- SFPL not responsible for the privacy practices of other sites

VIII. Library cards and circulation records
- SFPL does not maintain a history of what a library user has previously checked out once books and materials have been returned on time
- When overdue materials are returned and the account is cleared, title information associated with the library card number is deleted
- What information is needed to obtain a library card

IX. Security

- SFPL uses software programs that monitor network traffic to identify unauthorized attempts to upload or change information or otherwise cause damage
- Unauthorized attempts to upload information or change information prohibited under the Computer Fraud and Abuse Act of 1986 and 18 U.S.C. Section 1001 and 1030
- Except for the above purposes, no other attempts are made to identify individual library users or their usage habits

X. Law enforcement

- American judicial system provides the mechanism for seeking release of confidential records
- Library records will not be made available to any agency of the state, federal or local government except pursuant to such process, order or subpoena as may be authorized under the authority of, and pursuant to, federal, state, or local law relating to civil, criminal, or administrative discovery procedures or legislative investigatory power

XI. Information automatically collected and stored

- Types of information automatically gathered for statistical purposes
- Data collected not connected to any personal information or identity

Request for Proposals
San Francisco Public Library
Radio Frequency Identification (RFID) Systems
Proposed Table of Contents

I. Project Description
II. Project Goals
III. Specifications

1. Tags
    a. data elements encoded
    b. collision rate
    c. placement on item
    d. AV/media
    e. interchangeability of system
    f. research on durability & reliability
    g. specify read/write elements
2. Security
    a. how secured
    b. where data stored, no storage of data at gates
    c. how security will accomplished with 2 systems
3. Conversion/replicating stations
4. Circulation stations
    a. any proprietary hardware or software
    b. how works with 2 systems
    c. read range
    d. number of items able to be checked out at one time
    e. ability to circulate if system down
    f. ergonomic benefits
5. Self-charge stations
    a. read range
    b. ability to work with 2 systems
    c. number of items able to be checked out at one time
    d. multilingual interfaces
    e. ergonomic benefits
6. Inventory control
7. Peripheral equipments
    a. book drops
    b. patron self-check in stations
    c. compatibility with sorting systems
    d. third party vendor products and compatibility
8. Network/Automated Library System Requirements

9. Technical support and maintenance
    a. samples of documentation
    b. what elements are covered
    c. 24/7 support
    d. average time to resolve problems
    e. examples of custom programming
    f. warranties
10. Client references
    a. identify all libraries using system
    b. identify all that libraries that are also Innovative customers
    c. identify non-library clients
11. Other
    a. training required
    b. training provided
    c. any standard used in manufacturing system
    d. vendor participation in establishing standards
    e. list of library automation vendors system compatible with
    f. list any products under development
12. Company information
    a. annual report including statement of revenue
    b. number of employees for RFID operations
    c. sample contract

IV. Cost Proposal
1. Itemized all items for a complete system
2. Five year estimate for total cost and any discounts
3. Phased implementation

V. Submission Requirements
1. Date due
2. Number of copies
3. City & County of San Francisco purchasing & vendor requirements

VI. Selection Criteria

VII. Project Timeline

Attachments
Number of branches, number of items by type, annual circulation

San Francisco Public Library RFID Implementation
Proposed Plan of Action

Follow Berkeley Public Library's Recommended Best Practices:

- Library information on the tag should be limited to the barcode.
- Patrons should not have the ability to search the catalog by barcode.
- Do not utilize wireless connections to communicate between security gates, self-checks or other RFID-reading devices and the ILS database unless more security is incorporated in these communications.
- The implementation of an RFID system only reinforces the current library's duty to make sure their ILS database is as secure from unauthorized entry as possible.
- Do not implement smart-card RFID patron library cards.
- Inform patrons that your library utilizes RFID technology.

Plus

- Consider encryption of barcode data on tags

Action before, during & after RFID implementation:

- Encourage vendors to develop a protocol for formatting and placement of data on the tag while concurrently developing security to ensure privacy (such as encryption). Work with those knowledgeable about emerging technology to provide input and oversight.
- Encourage vendors to use or develop systems where the reader queries the tag first, rather than having the tag broadcast first, or require authentication before data is transmitted.
- Encourage vendors to develop password technology to help ensure that a reader purchased by an unauthorized source is not able to read any tag.
- To protect the library's investment in the technology, chips should be write-able, so that upgrades can be incorporated. Concurrently, security measures should be developed so that there is protection against unauthorized or accidental writing to the tag.
- Monitor the book industry for developments in the preprocessing of books with RFID tags. Book companies could allow much more data on the tag, or could reference the ISBN number on the tag, leading to easier detection of the book title.
- Monitor ongoing health studies.
- Monitor Weblogs and news sources for any RFID developments.
- Encourage development of green manufacturing techniques for tags (see http://www.rfidjournal.com/article/articleview/851/1/1/ for more information).

- Monitor and participate in discussions on RFID with library associations & taskforces (California Library Association, Public Library Association & American Library Association).

Standards Examined:

- **International Organization for Standardization ISO 15693-1** Physical characteristics of RFID labels
- **ISO 15693-2/3** Communication between reader & RFID label
- **NBLC Netherlands Association of Public Libraries** Generic Set of requirements RFID for public libraries
- **European Telecommunications Standards Institute ETSI 300 330** Radio equipment, short range devices, technical characteristics ..for radio equipment in the frequency range 9 kHZ to 25 MHz
- **Code of Federal Regulation 47 CFR Pt.15.225** Emissions from gates & readers
- **Universal Laboratories UL 1950 (to be replaced by UL 60950 by 2005)** Safety of Information Technology Equipment
- **Federal Communications Commission OET Bulletin #63** Understanding the FCC Regulations for Low-Power, Non-Licenses Transmitters
- **ISO Standards being developed ISO 21928** Data elements for RFID in libraries, **ISO 18000-3** Information Technology, radio-frequency identification for item management, parameters for air interface communications at 13.56 MHz

Organizations & experts contacted:

- Marlene Vogelsand, Resource Specialist, Pacific Energy Center
- Michael Herz, EMF Consultant, PG&E
- Ronald Arenson, Chair, Dept. of Radiology, UCSF
- California Dept. of Occupation Health & Safety
- California Electric and Magnetic Fields Program
- Dr. Patricia Buffler, Dean, School of Public Health, UCB
- Dr. Rajiv Bhatia, Medical Director, Environmental Health Management and Occupational Safety & Health, Dept. of Public Health (DPH)
- Vickie Wells, Director, Occupational Safety & Health unit, DPH
- Karen Heckman, Senior Industrial Hygienist, DPH
- Nancy Terranova, Safety Officer, DPH

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ntá, R.N., Dr.P.H.

artment of Health Services

SHORT FACTSHEET ON EMF

The use of electricity is taken for granted, but people are still concerned about whether powerlines and appliances are safe or unsafe. Here are answers to some common questions about electric and magnetic fields. See also our Web site at http://www.dhs.ca.gov/ps/deodc/ehib/.

What are electric and magnetic fields and why are people concerned about them?

Electric and magnetic fields are a basic force of nature (like gravity), generated by electricity. They are found almost everywhere. Electric and magnetic fields are found in nature, where they are created by such things as lightning and static electricity. Man-made fields are found wherever people use electricity, such as near powerlines and electrical appliances. Like sound, electric and magnetic fields are made of a mixture of components and so can be described in many different ways. Both have wave-like properties such as strength and "frequency" (how often they cycle back and forth). Sound can be loud (strong) or soft (weak), high or low pitched (different frequencies), suddenly loud or constant in tone, and pure or jarring. Similarly, electric and magnetic fields are a mixture of components. They can be strong or weak, have a high or low frequency, have sudden increases in strength ("transients") or a constant strength, and consist of one pure frequency or several (called "harmonics"). For example, the *strength* of a field can be weak and constant, as in most nighttime home environments, or it can be strong and vary from high to low every few seconds, as from an electric blanket set on high.

Powerlines and wiring in buildings and appliances generate 50 and 60 Hertz fields, sometimes referred to as "power frequency" fields. Hertz is the unit for measuring the frequency of fields in the number of wave cycles each second. The lower the frequency of a field, the lower its energy. Power frequency fields are low frequency fields and have low energy levels. Microwave and x-ray fields are high frequency fields and have high energy levels.

Early scientific studies found a link between increased rates of cancer and closeness to certain kinds of powerlines that can cause strong magnetic fields. Over the last two decades concern about the health effects of electric and magnetic fields has increased.

Where does EMF come from?

We are exposed to EMF from many sources, including high voltage transmission lines (usually on metal towers) carrying electricity from generating plants to communities, and distribution lines (usually on wooden telephone poles) that bring electricity to our homes, schools and workplaces. We are also exposed to magnetic fields from wiring in buildings and from all our electric appliances, like TV sets, radios, hair dryers, electric blankets and electric tools.

Most of the fields we experience in a day come from sources other than powerlines, such as wiring and appliances in homes or workplaces. The strength of both electric and magnetic fields decreases as you move away from their source, just as the heat from a campfire decreases with distance. For both electric and magnetic fields strength decreases more quickly with distance from "point" sources like appliances than from "line"

sources such as powerlines. For example, the magnetic field is down to "background levels" (the naturally occurring amounts) at 3 or 4 feet away from an appliance (*table 1*). It reaches background levels around 60 to 200 feet from a distribution line and about 300 to 1000 feet from a transmission line.

In spite of these similarities, electric fields and magnetic fields have somewhat different properties and possibly different ways of influencing our bodies. Electric fields can be shielded or weakened by trees, buildings and even human skin, but magnetic fields are not so easily blocked. Most recent studies have focused on the health effects of magnetic fields because they are not readily shielded and are easier to measure than electric fields.

Table 1. Examples of magnetic fields at particular distances from appliance surfaces.

	MILLIGAUSS (mG) at 1 foot	MILLIGAUSS (mG) at 3 feet
aquarium pump	0.35-18.21	0.01-1.17
band saw	0.51-14.24	0.05-0.75
can opener	7.19-163.02	1.30-6.44
clock	0.34-13.18	0.03-0.68
clothes iron	1.66-2.93	0.25-0.37
coffee machine	0.09-7.30	0-0.61
computer monitor	0.20-134.7	0.01-9.37
copier	0.05-18.38	0-2.39
desktop light	32.81	1.21
dishwasher	4.98-8.91	0.84-1.63
drill press	0.21-33.33	0.03-8.35
fax machine	0.16	0.03
food processor	6.19	0.35
garbage disposal	2.72-7.79	0.19-1.51
hairdryer	0.1-70	0.1-2.8*
microwave oven	0.59-54.33	0.11-4.66
mixer	0.49-41.21	0.09-3.93
portable heater	0.11-19.60	0-1.38
printer	0.74-43.11	0.18-2.45
portable fan	0.04-85.64	0.03-3.12
radio	0.43-4.07	0.03-0.98
range	0.60-35.93	0.05-2.83
refrigerator	0.12-2.99	0.01-0.60
scanner	2.18-26.91	0.09-3.48
sewing machine	3.79-7.70	0.35-0.45
tape player	0.13-6.01	0.01-1.66
television	1.80-12.99	0.07-1.11
toaster	0.29-4.63	0.01-0.47
vacuum	7.06-22.62	0.51-1.28
VCR	0.19-4.63	0.01-0.41
vending machine	0.46-5.05	0.02-0.59

L. Zaffanella, School Exposure Assessment Survey, California EMF Program, interim results, Nov. 1997.

What kind of scientific studies have been done?

Nobody knows for sure whether exposure to 50 and 60 Hertz fields is a health risk. Three kinds of studies have been done to explore this:

1) laboratory studies that expose human or animal cells or organs to fields, looking for biological changes

2) laboratory studies that expose animals to fields, looking for changes in body function, chemistry, behavior or general health

3) "epidemiological" studies that observe people's health and evaluate whether groups that have high or unusual EMF exposure have a greater chance for developing a disease like cancer than groups with "normal" or usual exposures

What do these studies show?

First, *these studies do not show a clear pattern of health hazards*. Some but not all animal and cell studies have shown biological changes linked with *magnetic field* exposure. However, it is not clear whether these biological changes would be the same in humans. Second, it is not clear which component (frequency, strength, harmonics, etc.) of magnetic field exposure might be hazardous.

Concern about possible health hazards from electric power use is supported by results of some scientific studies, but the evidence they provide is still incomplete and inconclusive and even, in some cases, contradictory. A good deal of research is underway to help resolve these questions and uncertainties. Most but not all epidemiological studies show an association between leukemia (a type of cancer) and an "indirect" estimate of high magnetic field exposure such as living very near a type of powerline that could cause of high magnetic fields or working where there is high electrical exposure. These estimates may not really represent a person's true exposure at the critical time period when they may have started developing an illness. Also, these studies show that some estimates of magnetic field exposure might be *related* to cancer, but this does not necessarily mean

that magnetic fields *cause* cancer. Indirect ways of estimating exposure may unintentionally include other risk factors like chemicals used at work or living in a particular neighborhood.

How would magnetic field measurements taken in my house compare to others?

The California Department of Health Services measured the strength of magnetic fields in the bedroom, family room, and kitchen and at the front door of some San Francisco Bay Area houses. Any appliances or electrical devices that were on at the time were left on. As shown in *table 2*, about half of the houses had an average magnetic field level below 0.71 milligauss (mG, the basic unit for measuring magnetic field strength), and 90% of homes had levels below 1.58 mG.

These are measures of the average strength of the 60 Hertz frequency magnetic field at a particular day and time. Field strengths vary with time, day and season depending on electricity use. For example, dinnertime readings are often higher than the middle of the night because appliances are in use. The other magnetic field components (like harmonics of other frequencies and short bursts of stronger fields called transients) are not included in these measurements, so they do not describe other aspects of the fields or other frequencies. Also, the field strength may change over time or distance depending on the location and type of its source.

Table 2. Distribution of average magnetic field strength of San Francisco Bay Area homes.

homes below average field strength	736 homes measured[1]
10%	0.43 mG
25%	0.54 mG
50%	0.71 mG
75%	0.98 mG
90%	1.58 mG

[1] Lee, G., California Exposure Assessment study (preliminary findings). California EMF Program. 1996.

Fairly simple measurements made by a trained technician can show the main indoor or outdoor sources of elevated magnetic fields in a home. Many utility companies and several private businesses can take these measurements. Taking measurements at different distances from powerlines can help show if the lines are sources for elevated magnetic fields inside a home. Turning off the house's main power switch will rule out sources caused by power use inside. In most cases it is possible to find and correct the source of elevated fields if they are due to faulty wiring, grounding problems or choice of lighting fixtures.

What are current government initiatives on EMF?

The State of California

The California Department of Education enacted regulations that require minimum distances between a *new school* and the edge of a transmission line "right-of-way," or the area immediately surrounding lines that utility companies need to access the lines for maintenance and repairs. The setback distances are 100 feet for 50-133 kV lines, 150 feet for 220-230 kV lines, and 350 feet for 500-550 kV lines. These distances were not based on specific biological evidence, but on the known fact that the strength of electric fields from powerlines drops to near background levels at the specified distances, given that no other major sources are present.

In 1993, the California Public Utilities Commission (CPUC) authorized the state's investor-owned utilities to carry out "no and low cost EMF avoidance and measures" in construction of new and upgraded utility projects. The CPUC also established our California EMF research, education, and technical assistance program under the guidance of the Department of Health Services. This program will provide information to assist those responsible for making public policy. However, at present the state of California has no formal rules or guidelines, but advocates "no and low cost" of EMF. This means minimizing EMF exposure when it is easy and inexpensive to do so. Right now there is not enough evidence to justify making regulations governing EMF.

The Federal Government

At the Federal level, the Federal Energy Policy Act of 1992 included a five-year program of electric and magnetic field (EMF) Research and Public Information Dissemination (EMF-RAPID). The EMF-RAPID Program asked these questions: Does exposure to EMF produced by power generation, trans-

mission, and use of electric energy pose a risk to human health? If so, how significant is the risk, who is at risk, and how can the risk be reduced?

In 1998, a working group of experts gathered by the EMF-RAPID Program met to review the research that has been done on the possible health risks associated with EMF. This group reviewed the studies that have been done on the subject, and then voted on whether they believed that exposure to EMF might be a health risk. They then published a report describing their findings. A majority of the scientists on this working group voted that the epidemiology studies of childhood leukemia provide enough evidence to classify EMF as a "possible human carcinogen." This means that, based on the evidence, these researchers believe that it is possible that EMF causes cancer, but they are not sure. They also decided that they did not have enough evidence to determine whether EMF exposure might cause other diseases.

The EMF-RAPID Program released its final report to Congress in 1999. This report explains the program's findings, including the results of its working group and many research projects. The final report states that "the NIEHS believes that there is weak evidence for possible health effects from [power frequency] ELF-EMF exposures, and until stronger evidence changes this opinion, inexpensive and safe reductions should be encouraged." (page 38) For more information on the EMF-RAPID program, or to look at these reports, contact the EMF-RAPID Program, National Institute of Environmental Health Sciences, National Institutes of Health, P.O. Box 12233, Research Triangle Park, North Carolina 27709, or visit their Web site at http://www.niehs.nih.gov/emfrapid. When ordering a copy of the final report, refer to the NIH publication number 99-4493.

Conclusion

Until we have more information, some communities and individuals are adopting the "no and low cost" avoidance strategy. It's easy to move an electric clock a few feet away from a bedside table, and it's simple to sit further away from the computer monitor. Table 1 above shows how quickly EMF decreases as you move away from an appliance. It almost disappears at distances of 3 to 5 feet. It is possible to take measurements in your home to identify sources of EMF, including faulty electrical wiring that can produce elevated magnetic fields and electrical shock. In California, the Public Utilities Commission requires investor-owned utilities to provide magnetic field measurements at no charge to their customers.

Contact us for a more detailed long factsheet. Please send us your questions and comments, too.

CALIFORNIA ELECTRIC AND MAGNETIC FIELDS PROGRAM
A project of the California Department of Health Services and the Public Health Institute

(510) 622-4500 *fax* (510) 622-4505
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Oakland, CA 94612
http://www.dhs.ca.gov/ps/deodc/ehib/

World Health Organization

Summary of health effects of electromagnetic fields.

What happens when you are exposed to electromagnetic fields?

Exposure to electromagnetic fields is not a new phenomenon. However, during the 20th century, environmental exposure to man-made electromagnetic fields has been steadily increasing as growing electricity demand, ever-advancing technologies and changes in social behaviour have created more and more artificial sources. Everyone is exposed to a complex mix of weak electric and magnetic fields, both at home and at work, from the generation and transmission of electricity, domestic appliances and industrial equipment, to telecommunications and broadcasting.

Tiny electrical currents exist in the human body due to the chemical reactions that occur as part of the normal bodily functions, even in the absence of external electric fields. For example, nerves relay signals by transmitting electric impulses. Most biochemical reactions from digestion to brain activities go along with the rearrangement of charged particles. Even the heart is electrically active - an activity that your doctor can trace with the help of an electrocardiogram.

Low-frequency electric fields influence the human body just as they influence any other material made up of charged particles. When electric fields act on conductive materials, they influence the distribution of electric charges at their surface. They cause current to flow through the body to the ground.

Low-frequency magnetic fields induce circulating currents within the human body. The strength of these currents depends on the intensity of the outside magnetic field. If sufficiently large, these currents could cause stimulation of nerves and muscles or affect other biological processes.

Both electric and magnetic fields induce voltages and currents in the body but even directly beneath a high voltage transmission line, the induced currents are very small compared to thresholds for producing shock and other electrical effects.

Heating is the main biological effect of the electromagnetic fields of radiofrequency fields. In microwave ovens this fact is employed to warm up food. The levels of radiofrequency fields to which people are normally exposed are very much lower than those needed to produce significant heating. The heating effect of radiowaves forms the underlying basis for current guidelines. Scientists are also investigating the possibility that effects below the threshold level for body heating occur as a result of long-term exposure. To date, no adverse health effects from low level, long-term exposure to radiofrequency or power frequency fields have been confirmed, but scientists are actively continuing to research this area.

Biological effects or health effects? What is a health hazard?

Biological effects are measurable responses to a stimulus or to a change in the environment. These changes are not necessarily harmful to your health. For example, listening to music, reading a book, eating an apple or playing tennis will produce a range of biological effects. Nevertheless, none of these activities is expected to cause health effects. The body has sophisticated mechanisms to adjust to the many and varied influences we encounter in our environment. Ongoing change forms a normal part of our lives. But, of course, the body does not possess adequate compensation mechanisms for all biological effects. Changes that are irreversible and stress the system for long periods of time may constitute a health hazard.

An adverse health effect causes detectable impairment of the health of the exposed individual or of his or her offspring; a biological effect, on the other hand, may or may not result in an adverse health effect. ICNIRP guidelines

It is not disputed that electromagnetic fields above certain levels can trigger biological effects. Experiments with healthy volunteers indicate that short-term exposure at the levels present in the environment or in the home do not cause any apparent detrimental effects. Exposures to higher levels that might be harmful are restricted by national and international guidelines. The current debate is centred on whether long-term low level exposure can evoke biological responses and influence people's well being.

Widespread concerns for health

A look at the news headlines of recent years allows some insight into the various areas of public concern. Over the course of the past decade, numerous electromagnetic field sources have become the focus of health concerns, including power lines, microwave ovens, computer and TV screens, security devices, radars and most recently mobile phones and their base stations.

The International EMF Project

In response to growing public health concerns over possible health effects from exposure to an ever increasing number and diversity of electromagnetic field sources, in 1996 the World Health Organization (WHO) launched a large, multidisciplinary research effort. The International EMF Project brings together current knowledge and available resources of key international and national agencies and scientific institutions.

Conclusions from scientific research

In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research.

Effects on general health
Some members of the public have attributed a diffuse collection of symptoms to low levels of exposure to electromagnetic fields at home. Reported symptoms include headaches, anxiety, suicide and depression, nausea, fatigue and loss of libido. To date, scientific evidence does not support a link between these symptoms and exposure to electromagnetic fields. At least some of these health problems may be caused by noise or other factors in the environment, or by anxiety related to the presence of new technologies.

Effects on pregnancy outcome
Many different sources and exposures to electromagnetic fields in the living and working environment, including computer screens, water beds and electric blankets, radiofrequency welding machines, diathermy equipment and radar, have been evaluated by the WHO and other organizations. The overall weight of evidence shows that exposure to fields at typical environmental levels does not increase the risk of any adverse outcome such as spontaneous abortions, malformations, low birth weight, and congenital diseases. There have been occasional reports of associations between health problems and presumed exposure to electromagnetic fields, such as reports of prematurity and low birth weight in children of workers in the electronics industry, but these have not been regarded by the scientific community as being necessarily caused by the field exposures (as opposed to factors such as exposure to solvents).

Cataracts
General eye irritation and cataracts have sometimes been reported in workers exposed to high levels of radiofrequency and microwave radiation, but animal studies do not support the idea that such forms of eye damage can be produced at levels that are not thermally hazardous. There is no [illegible]dence that these effects occur at levels experienced by the general public.

Electromagnetic fields and cancer
Despite many studies, the evidence for any effect remains highly controversial. However, it is clear that if electromagnetic fields do have an effect on cancer, then any increase in risk will be extremely small. The results to date contain many inconsistencies, but no large increases in risk have been found for any cancer in children or adults.

A number of epidemiological studies suggest small increases in risk of childhood leukemia with exposure to low frequency magnetic fields in the home. However, scientists have not generally concluded that these results indicate a cause-effect relation between exposure to the fields and disease (as opposed to artifacts in the study or effects unrelated to field exposure). In part, this conclusion has been reached because animal and laboratory studies fail to demonstrate any reproducible effects that are consistent with the hypothesis that fields cause or promote cancer. Large-scale studies are currently underway in several countries and may help resolve these issues.

Electromagnetic hypersensitivity and depression
Some individuals report "hypersensitivity" to electric or magnetic fields. They ask whether aches and pains, headaches, depression, lethargy, sleeping disorders, and even convulsions and epileptic seizures could be associated with electromagnetic field exposure.

There is little scientific evidence to support the idea of electromagnetic hypersensitivity. Recent Scandinavian studies found that individuals do not show consistent reactions under properly controlled conditions of electromagnetic field exposure. Nor is there any accepted biological mechanism to explain hypersensitivity. Research on this subject is difficult because many other subjective responses may be involved, apart from direct effects of fields themselves. More studies are continuing on the subject.

The focus of current and future research

Much effort is currently being directed towards the study of electromagnetic fields in relation to cancer. Studies in search for possible carcinogenic (cancer-producing) effects of power frequency fields is continuing, although at a reduced level compared to that of the late 1990's.

The long-term health effects of mobile telephone use is another topic of much current research. No obvious adverse effect of exposure to low level radiofrequency fields has been discovered. However, given public concerns regarding the safety of cellular telephones, further research aims to determine whether any less obvious effects might occur at very low exposure levels.

Key points

1. A wide range of environmental influences causes biological effects. 'Biological effect' does not equal 'health hazard'. Special research is needed to identify and measure health hazards.
2. At low frequencies, external electric and magnetic fields induce small circulating currents within the body. In virtually all ordinary environments, the levels of induced currents inside the body are too small to produce obvious effects.
3. The main effect of radiofrequency electromagnetic fields is heating of body tissues.
4. There is no doubt that short-term exposure to very high levels of electromagnetic fields can be harmful to health. Current public concern focuses on possible long-term health effects caused by exposure to electromagnetic fields at levels below those required to trigger acute biological responses.
5. WHO's International EMF Project was launched to provide scientifically sound and objective answers to public concerns about possible hazards of low level electromagnetic fields.
6. Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.
7. The focus of international research is the investigation of possible links between cancer and electromagnetic fields, at power line and radiofrequencies.

(An excerpt from the World Health Organization, “About electromagnetic fields.” http://www.who.int/peh-emf/about/WhatisEMF/en/index.html)

Revised Budget for Phased RFID Implementation

2004-2005 - Year 1 of 6 year implementation plan

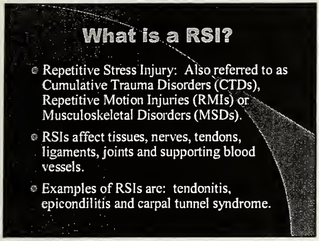
- Year 1 would only include items in Excelsior, Main Library AV Center & New materials purchased during the fiscal year
- Library budget would need to cover tags, labels, installation, training, maintenance & tax
- Gift funds would cover equipment for the Main Library
- Branch Capital Campaign funds would cover equipment for Excelsior
- Quotes were obtained from three vendors
- Current budget costs are based on the mid-range quote

Fund Source 2004/2005	Purpose	Cost
Library Budget	296,000 tags: Books/videos/audio @ .55	$162,800
	50,000 tags: DVD/CD @ $1.45	72,500
	346,000 items: Labels @ .04	13,840
	Installation of 8 stations @ $1,794	14,352
	Maintenance for 2 sites @ $3,000	6,000
	Training and miscellaneous	8,263
	Tax	22,244
	Total Library Budget Funds	*299,999*
Gift Funds – Main	2 Self-charge stations @ $9,000	$18,000
	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Main Gift Funds	*51,863*
Branch Capital Campaign	2 Self-charge stations @ $9,000	$18,000
Excelsior	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Branch Capital Campaign Funds	*51,863*
All sources – Total costs		$403,725

Revised Budget for Phased RFID Implementation
2004 – 2010

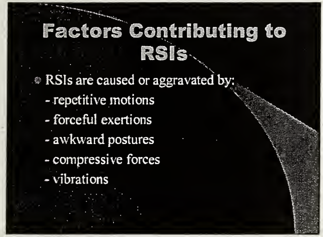
- Six year implementation plan based on bond schedule and POE schedule for the first floor of the Main Library

Fiscal Year	Purpose	Cost
2004/2005		
▪ Library Budget	346,000 tags, labels, etc.	$299,999
▪ Gift Funds	Main	51,863
▪ Branch Capital Campaign	Excelsior	51,863
▪ *Total Year One – All Sources*		*403,725*
2005/2006		
▪ Library Budget	270,000 tags, labels, etc.	$207,800
▪ Gift Funds	Main – POE	118,600
▪ Branch Capital Campaign	Glen Park, Sunset (2), Western Addition, Mission Bay, West Portal	256,800
▪ *Total Year Two – All Sources*		*583,200*
2006/2007		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Marina, Noe Valley, Eureka Valley, Portola, Ingleside, Park, Bernal Heights, Visitacion Valley	342,400
▪ *Total Year Three – All Sources*		*581,200*
2007/2008		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Oretga, Richmond (2), Potrero, Bayview, North Beach, Merced, Parkside	342,400
▪ *Total Year Four – All Sources*		*581,200*
2008/2009		
▪ Library Budget	270,000 tags, labels, etc.	$197,328
▪ Branch Capital Campaign	Anza, Golden Gate Valley, Presidio	128,400
▪ *Total Year Five – All Sources*		*325,728*
2009/2010		
▪ Library Budget	270,000 tags, labels, etc.	$202,710
▪ Library Budget	Chinatown (2), Mission, Oceanview	171,200
▪ *Total Year Six – All Sources*		*373,910*
Total – Library Budget		**1,556,637**
Total – Gift/Capital Campaign		**1,292,326**
Total – All Sources		**2,848,963**



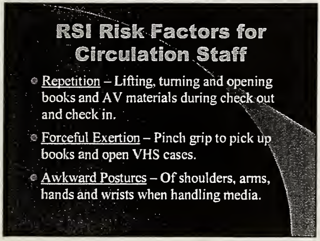
What is a RSI?

- Repetitive Stress Injury: Also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs).
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels.
- Examples of RSIs are: tendonitis, epicondilitis and carpal tunnel syndrome.



Factors Contributing to RSIs

- RSIs are caused or aggravated by:
  - repetitive motions
  - forceful exertions
  - awkward postures
  - compressive forces
  - vibrations

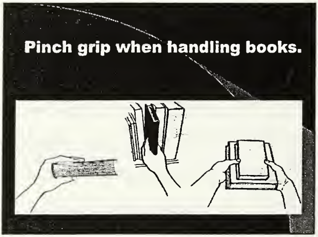


RSI Risk Factors for Circulation Staff

- Repetition – Lifting, turning and opening books and AV materials during check out and check in.
- Forceful Exertion – Pinch grip to pick up books and open VHS cases.
- Awkward Postures – Of shoulders, arms, hands and wrists when handling media.

Current Risk Factors
Check Out Desk

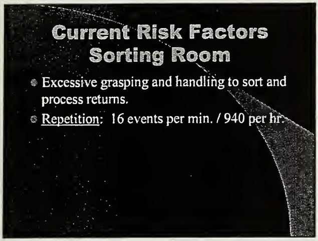
- Each piece of media must be individually handled.
- Repetition: 12 events per min. / 768 per hr. Repetitive tasks exceed 3 events / minute.
- Awkward postures requiring pinch grip
- Awkward, forceful hand / arm motions to desensitize each piece of material handled.



Pinch grip when handling books.

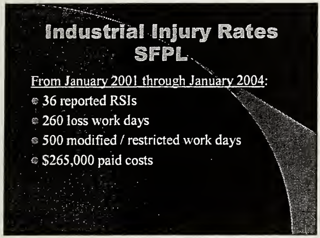
Current Risk Factors
Check In Desk

- Each piece of media must be individually handled.
- Repetition: 10 events per min. / 575 per hr. Repetitive tasks exceed 3 events / minute.
- 70% of books must be lifted, turned and flipped over in order to scan.
- 50% of returned items are A/V materials and 70% of A/V items must be opened.



Current Risk Factors Sorting Room

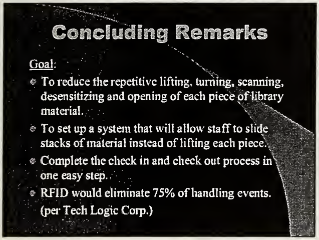
- Excessive grasping and handling to sort and process returns.
- Repetition: 16 events per min. / 940 per hr.



Industrial Injury Rates SFPL

From January 2001 through January 2004:

- 36 reported RSIs
- 260 loss work days
- 500 modified / restricted work days
- $265,000 paid costs



Concluding Remarks

Goal:

- To reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material.
- To set up a system that will allow staff to slide stacks of material instead of lifting each piece.
- Complete the check in and check out process in one easy step.
- RFID would eliminate 75% of handling events. (per Tech Logic Corp.)

RFID Technology and Reducing Risk Factors for RSI Injuries

RSI Definition

- Repetitive Stress Injuries also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs)
- RSIs are disorders of the musculoskeletal and nervous systems caused or aggravated by repetitive motions, forceful exertions, awkward posture and vibration or compressive forces (hard, sharp edges)
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels resulting in pain, tension and strains

General Risk Factors for RSIs among Circulation Staff:

- Repetition: Lifting, turning and opening books and AV materials during check-out and check-in
- Forceful exertion: Required pinch grip when picking up books and media and when opening and processing AV material
- Awkward postures of upper extremities (shoulders, arms, hands and wrists) when handling media

Specific Work Rates and Hazards at the Main Library*:

- Check-out Desk: Awkward postures and excessive handling requiring pinch grip and force to check-out items. Each piece of media must be individually handled. Workload: 12 events per minute/ 768 per hour (Highly repetitive when events exceed 3 per minute). Awkward and forceful hand/arm motions to desensitize material.
- Check-in Desk: Excessive grasping and handling to process returns. Each piece of media must be handled individually and 70% must be opened. 70% of books are being lifted, turned and flipped over in order to scan. Workload: 10 events per minute/ 575 per hour (Highly repetitive when events exceed 3 per minute)
- Sorting Room: Excessive grasping and handling to sort/process returns. Workload: 16 events per minute/ 940 per hour (Highly repetitive when events exceed 3 per minute)

Public Service Employees with Industrial Injuries:

- From January 2001 through January 2004 thirty-six (36) employees whose duties include public service have filed Worker's Compensation claims resulting in 260 loss work days; 500 modified/restricted work days; $265,000 paid costs

Summary:

- Goal is to reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material and to set up a system that will allow staff to slide material into place and have one motion for check-in and out (RFID).

*Ergonomic consultant report for 1st Floor Remodeling Project & Dept. of Public Health staff

3/02/04

March 29, 2004

TO: Library Commissioners
Susan Hildreth, City Librarian

FR: George Nichols, Finance Director

RE: **2004-05 BUDGET STATUS**

On February 19, 2004, the Commission approved the Library's proposed budget of $88.408 million for 2004-05 (Attachment A). The Commission approved the budget with the understanding that increases for health and dental benefits and retirement had not been finalized and that additional changes would be made to the budget once costs were determined. Since the Commission's action, baseline adjustments made by the Controller related to health/dental, retirement, and other issues increased the Library's budget to $88.658 million, resulting in a deficit of $742,149.

Moreover, the Governor's proposed State budget includes a shift of $1.3 billion in statewide local property tax dollars to fund K-14 that could reduce discretionary General Fund (GF) in San Francisco by $54 million and subsequently, the Library's Charter required allocation of GF by $1.220 million. If the Governor's proposed ERAF[1] shift is approved by the Legislature, the Library's shortfall would grow to $1.962 million.

The outcome of the proposed shift will not be known until at least May when the Governor releases his May Revision; and, it may not be known until the Legislature adopts a budget later this summer. The Mayor's Budget Office has not issued instructions regarding contingency plans to cover the loss of revenue resulting from the ERAF shift; however, we must be prepared in case it is approved.

It must be noted, that the current budget and our balancing plan assumes no change in collective bargaining agreements. Our budget assumes that employees will continue to pay the 7.5% retirement; and, that no salary adjustments will be provided. Should either of these assumptions prove to be wrong, additional and more drastic reductions will be required.

To balance the budget, the Library has prepared:

1. A reduction plan to close the $742,000 gap that exists now; and,
2. A contingency reduction plan to cover the potential revenue loss of $1.220 million should the ERAF shift be approved.

The budget reduction plan and the contingency reduction plan are summarized on Attachment B. The underlying goals of both plans are to:

- Balance the budget without layoffs.
- Maintain critical baseline services and minimize impacts on public service.

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[1] Educational Revenue Augmentation Fund (ERAF).

- Provide a viable level of funding for deferred maintenance and computer replacement.

- Maintain and increase if possible, the baseline books and materials budget.

- If approved by the Commission, fund RFID implementation at a reduced level. Includes conversion of collections at Excelsior Branch Library and the Main Library A/V Center. First phase implementation would be funded at $300,000 from the LPF reserve fund.

Reduction Plan to Cover Baseline Cost Increases.

The $742,000 deficit results from the following adjustments made to the budget after it was approved by the Commission and submitted to the Mayor:

- Adoption by the Board of Directors of the San Francisco Retirement System (SFRS) of an employer retirement contribution rate of 4.48% for 2004-05[2]. The baseline budget provided by the Controller included a rate adjustment of 2.4% or $808,000. The 4.48% rate equates $1.506 million or $698,000 more than initially estimated.

- Increase to health/dental plans left unfunded in the budget approved by the Commission in anticipation of additional adjustments that would be made to the budget once all costs and revenue adjustments were known. The increase to health/dental benefits totaled $430,565.

- The Charter amendment enacted in November that established a City Services Auditor function in the Controller's Office. The ordinance requires the Controller to conduct financial auditing, performance auditing, best practice analysis, and special reviews; and, sets aside 0.2% of the budget to fund the program. The Library's assessment is $112,000.

- Actual costs calculated by the City's budget system for proposed new positions and substitutions or reclassifications; and, other miscellaneous system adjustments increased the budget by a net $9,437.

To balance the budget, the Library will withdraw or defer several new funding requests for a savings of $217,000; reduce funding for several new funding requests for a savings of $122,875; utilize accumulated fund balances remaining in a State ILL/DL account to fund a portion of the proposed increase to the book budget saving $259,000; and base budget reductions including a voluntary salary reduction of 15% by the City Librarian, miscellaneous baseline reductions and elimination of the Tool Lending Center grant for savings of $254,184. Specifically,

- Funding will be withdrawn for Millennium ILS upgrades ($60,000); Web Management Software ($10,000); purchase of a delivery truck ($49,000); recruitment materials and supplies ($5,000); roof inspections ($23,000); table repairs ($10,000); and repair of Park Branch stairs ($60,000).

- Funding will be reduced for computer replacements ($75,000); user placed reserves in the Branch system ($25,875); and A/V equipment replacement ($22,000).

- State grant balances from Interlibrary Loan and Direct Loan reimbursements received by the Library prior to 2002-03, will be used to fund $259,000 of the proposed $545,500 increase to the book

budget. Funds will be used specifically for opening day collections in the Branch System. This leaves $206,000 to permanently increase the base books & material budget and $80,000 to purchase books for the BLIP bookmobiles funded by Library Preservation Funds.

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[2] Per the Controller, the increase is due to the Retirement Fund's surplus funded status, lower than anticipated investment returns, and the phasing in of voter-approved retirement benefit increases that require the City to start making contributions. SFRS and the Controller are projecting that rates will increase to 6.48% and 8.48% in 2005-06 and 2006-07, respectively.

- Baseline reductions of $254,184. Includes voluntary 15% salary reduction by City Librarian ($23,252); elimination Tool Lending Center grant ($175,000); and other miscellaneous reductions ($55,932).

Contingency Plan for Loss of $1.2 million General Fund Revenue (ERAF)

Should the Legislature approve the Governor's proposed shift of property tax dollars to K-14, the Library will face an additional shortfall of $1.220 million. To cover the additional shortfall, the Library would withdraw additional new funding requests, make further reductions to new funding requests that remain, make additional cuts in baseline programs, and utilize the LPF reserve to cover the remaining need and mitigate the need to make deep cuts in baseline programs in 2004-05. As currently proposed by the Governor, the ERAF shift would be a permanent realignment of local property tax dollars resulting in an ongoing reduction of GF allocations made to the Library.

Specifically, the Library will:

- Withdraw remaining funds for reserve processing for Branch Libraries ($25,875) and audio-visual equipment replacement ($22,000) for additional savings of $47,875.
- Reduce funding for a full-time Delivery Driver position to a half-time position, saving an additional $25,224.
- Further reduce funding for PC and workstation replacement from $225,000 to $200,000 for additional savings of $25,000.
- Withdraw funds to increase the base books and materials budget for additional savings of $206,000. Budget would still provide $259,000 from ILL/DL reimbursements for opening day collections and $80,500 for the two Branch Library Improvement Program bookmobiles.
- Make additional baseline program cuts for savings of $132,368.
- Use $534,624 from the LPF reserve to cover remaining need and mitigate the need to make deeper baseline program cuts in 2004-05.

Impact of Proposed Balancing Plans on Library Preservation Fund Reserve

The LPF reserve currently has a balance of $2.249 million[3]. To offset the $742,000 deficit caused by additional baseline adjustments made by the Mayor and the Controller, the Library is not using LPF reserve funds. In fact, due to reductions to baseline and new funding proposals that exceed the shortfall, the Library will actually reduce spending from the reserve by $110,000. The Library would use $912,000 from the reserve (reduced from $1.022 million) to support its Capital Improvement Program leaving a balance of $1.336 million (2.5%). Of the $912,000 – $901,426 is for the Main Library POE project and $10,434 is for Deferred Maintenance. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.212 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $1.037 million (1.9%).

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[3] The reserve balance is expected to increase by year-end due to a projected increase in local revenue allocable to the Library under the arter requirement as reported in the Controller's "FY 2003-04 Six-Month Budget Status Report" issued on February 9, 2004; and, rrent year appropriation savings a portion of which are credited to the LPF.

To cover the deficit resulting from additional baseline increases and the loss of revenue should the Governor's proposed ERAF shift be approved, the Library in addition to the budget cuts described above, would use a total $1.616 million from the LPF reserve leaving a balance of $632,523 (1.2%). Of the $1.616 million, $901,426 is for the Main Library POE project, $180,000 is for Deferred Maintenance, and $534,624 is to cover the shortfall that remains after making the budget cuts described above. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.916 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $332,523 (0.6%).

The Contingency Reduction Plan requires the use of additional LPF reserves to mitigate the need for deep program cuts in 2004-05. Although, the reserve balance will be seriously depleted if the ERAF shift is approved, the Library would be able to maintain core and mission-critical public services in 2004-05 with minimal loss of jobs and no layoffs. The use of LPF reserves to support the Library's baseline operations is a short-term measure to minimize baseline cuts next year – one of the principal reasons we have labored to maintain a prudent reserve. The impact to the LPF reserve is illustrated on Attachment C.

System-wide Budget Review

In conjunction with the short-term plans to balance the 2004-05 budget, the Library needs to proactively plan for a future that could include further revenue loss (local and state) and more significantly, further growth in baseline costs.[4] During 2004-05, the Library will conduct a comprehensive review of all Library services and programs. The goal of this system-wide review is to look for opportunities to reduce costs by eliminating or reducing non-core programs; to reduce staffing levels through reorganization, consolidation, and redeployment; and to develop a contingency reduction plan for 2005-06. In reducing staffing levels, our goal would be to eliminate positions (vacant) and not people. As stated, cost reductions will probably be necessary to mitigate further erosion in our revenue base; and more significantly, to offset increases in salaries, benefits, work comp, and other baseline costs that are likely in 2005-06.

Given the economic uncertainties and the prospects of City-wide growth in baseline expenditures (i.e., employee compensation), it is not likely that the Library will be allocated General Fund dollars beyond amounts required by the Charter. Consequently, it will be incumbent on the Library and the Commission to conduct this review and to proactively plan for the challenging times that lay ahead.

cc: Paul Underwood, Deputy City Librarian

Attachments

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[4] The Library's employee health/dental plan costs have grown by more than $835,000 ($404,000 in 2003-04 and $431,000 in 2004-05); Worker's Compensation direct costs have increased $426,000 since 2001-02; from $379,000 in 01-02 to a projected $805,000 in 04-05; Retirement costs will increase by $1.5 million in 2004-05. The Controller, the Mayor's Budget Director, and the BoS Budget Analyst in their report to the Mayor titled, "Three-Year General Fund Budget Projection, FY 2004-05 through 2006-07" dated March 19, 2004 project health benefits to increase 15.5% per year in 05-06 and 06-07; retirement contribution to increase 2% per year in 05-06 and 06-07; and worker's compensation to increase significantly in 05-06 and 06-07. Moreover, collective bargaining will significantly impact the budget in the near future. Unions may negotiate restoration of some if not all of the 7.5% retirement that members picked-up in 2003-04 (up to $2.5 million impact); and, salary adjustments could become an issue as no increase was provided in 2003-04. If no increase is provided in 2004-05, increasing salaries could become a major issue and a significant cost.

3/30/2004

Public Library
2004-05 Proposed Budget

	Operating	Capital	Other	Total
SES				
2003-04 AAO	**$ 54,476,188**	**$ 1,118,652**	**$ 1,287,000**	**$ 56,881,840**
One-time	$ (1,112,808)	$ (1,118,652)	$ (1,287,000)	$ (3,518,460)
Retirement Contribution	$ 808,167			$ 808,167
Unemployment	$ 76,278			$ 76,278
Misc. Salary & Fringe Adjustments	$ (10,943)			$ (10,943)
Annualized FTE	$ 66,994			$ 66,994
State Grant (Project Read)	$ 2,619			$ 2,619
Gift Reduction (PIO)	$ (33,377)			$ (33,377)
Substitutions	$ 37,621			$ 37,621
Lease Increases	$ 3,485			$ 3,485
Work Order Changes	$ 127,489	$ -	$ -	$ 127,489
Subtotal Baseline Changes	**$ (34,475)**	**$ (1,118,652)**	**$ (1,287,000)**	**$ (2,440,127)**
Revised Baseline (BPREP)	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Health Benefits (pending)	$ -	$ -	$ -	$ -
Estimated Baseline	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Policy Changes (Attachment A)	$ 1,243,826	$ 31,722,081	$ -	$ 32,965,907
Total Proposed Budget	**$ 55,685,539**	**$ 31,722,081**	**$ -**	**$ 87,407,620**
SOURCES				
LPF & Other Operating Revenue	$ 56,198,600	$ 248,692	$ -	$ 56,447,292
LPF Reserve	$ -	$ 1,022,734		$ 1,022,734
Library Improvement Fund	$ -	$ 1,450,655		$ 1,450,655
Branch Library Improvement Bonds	$ -	$ 29,000,000		$ 29,000,000
Total Sources	**$ 56,198,600**	**$ 31,722,081**	**$ -**	**$ 87,920,681**
Sources less Uses	**$ 513,061**	**$ -**	**$ -**	**$ 513,061**

Note: Budget does not reflect increases in Health Plan premiums which are estimated at 15% or $644,000. Costs will be added to the budget by the Mayor/Controller, once actuals are determined in March/April.

3/30/2004

Attachment B

Public Library
2004-05 Proposed Budget

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
Sources/Revenue	$ 87,916,131	$ (1,220,000)	$ 86,696,131
Budget/Expenditures	$ 88,658,280	$ -	$ 88,658,280
Deficit	$ (742,149)	$ (1,220,000)	$ (1,962,149)
Baseline Cuts	$ 254,184	$ 132,368	$ 386,552
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
Reduce training funds (Admin - HR)	$ 11,880	$ -	$ 11,880
Eliminate access to RLIN bibliographic utility (Techn Srvcs).	$ 600	$ -	$ 600
Reduce funds budgeted for data processing supplies (Info Technology).	$ 20,000	$ -	$ 20,000
Eliminate small equipment (burster) maintenance funds (Techn Srvcs).	$ 1,152	$ -	$ 1,152
Innovacq maintenance service funds (Techn Srvcs).	$ -	$ 20,576	$ 20,576
Eliminate half-time 1630 Acct. Clerk (Admin - FO)	$ -	$ 26,780	$ 26,780
Eliminate 15 hr/week 3602 Page - Borrower Services (Main)	$ -	$ 12,012	$ 12,012
Eliminate half-time Library PageMain's Childrens' Center (OCYS)	$ -	$ 21,000	$ 21,000
Reduce materials & supplies budget (Admin - CL).	$ -	$ 3,000	$ 3,000
Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Budget Change Proposals (New Spending)	$ 598,874	$ 442,099	$ 1,040,973
Book Budget	$ 259,000	$ 206,000	$ 465,000
Technology Refreshement	$ 75,000	$ 25,000	$ 100,000
Coldfusion WEB Software	$ 10,000	$ -	$ 10,000
III Millennium Enhancements	$ 60,000	$ -	$ 60,000
Reserve processing (4 HT 3602)	$ 25,874	$ 25,875	$ 51,749
Deferred Maintenance Program	$ -	$ 70,000	$ 70,000
Delivery Truck Driver	$ -	$ 25,224	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ -	$ 49,000
Audio-Visual Equipment	$ 22,000	$ 22,000	$ 44,000
Elevator Maintenance Services	$ -	$ -	$ -
M&S for recruitment (HR).	$ 5,000	$ -	$ 5,000
Roof Inspections	$ 23,000	$ -	$ 23,000
Refinish vandalized wooden tables	$ 10,000	$ -	$ 10,000
M&S OCYS	$ -	$ 8,000	$ 8,000
Main Library windows	$ -	$ 60,000	$ 60,000
Park front stairs	$ 60,000	$ -	$ 60,000
Convert .50 1022 to 1.0	$ -	$ -	$ -
Add .25 3618 (Main)	$ -	$ -	$ -
Library Preservation Fund Reserve	$ (110,909)	$ 645,534	$ 534,625

ESTIMATED REVISED 2004-05 BUDGET			
Sources/Revenue	$ 87,805,222	$ (574,467)	$ 87,230,756
Budget/Expenditures	$ 87,805,222	$ (574,467)	$ 87,230,756
Deficit	$ -	$ -	$ -

FLN=Attachments B and C (4-1-04 Commission Report)(Attachment B)

3/30/2004

Attachment C

Public Library
Proposed 2004-05 Budget
Library Preservation Fund Reserve

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
LPF Reserve Balance (1/23/04)	$ 2,248,572	$ 2,248,572	$ -
Main Library POE	$ (901,426)	$ (901,426)	$ -
Deferred Maintenance	$ (10,434)	$ (180,000)	$ (169,566)
Remaining Base Deficiency (Fund from LPF Reserve)	$ -	$ (534,625)	$ (534,625)
Remaining Balance	$ 1,336,712	$ 632,522	$ (704,191)
RFID	$ (300,000)	$ (300,000)	$ -
Remaining Balance	$ 1,036,712	$ 332,522	$ (704,191)
	1.9%	0.6%	

2004-05 Proposed Budget

Budget Change Propo[illegible]s (New Funding Initiatives)

	Budgeted	Reduction Plan	Contingency Reductions	Total Reductions	Balance
Book Budget	$ 545,500	$ (259,000)	$ (206,000)	$ (465,000)	$ 80,500
Technology Refreshement	$ 300,000	$ (75,000)	$ (25,000)	$ (100,000)	$ 200,000
Coldfusion WEB Software	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
III Millennium Enhancements	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
Reserve processing (4 HT 3602)	$ 51,749	$ (25,874)	$ (25,875)	$ (51,749)	$ -
Deferred Maintenance Program	$ 200,000	$ -	$ (70,000)	$ (70,000)	$ 130,000
Delivery Truck Driver	$ 50,448	$ -	$ (25,224)	$ (25,224)	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ (49,000)	$ -	$ (49,000)	$ -
Audio-Visual Equipment	$ 44,000	$ (22,000)	$ (22,000)	$ (44,000)	$ -
Elevator Maintenance Services	$ 70,000	$ -	$ -	$ -	$ 70,000
M&S for recruitment (HR).	$ 5,000	$ (5,000)	$ -	$ (5,000)	$ -
Roof Inspections	$ 23,000	$ (23,000)	$ -	$ (23,000)	$ -
Refinish vandalized wooden tables	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
M&S OCYS	$ 8,000	$ -	$ (8,000)	$ (8,000)	$ -
Main Library windows	$ 110,000	$ -	$ (60,000)	$ (60,000)	$ 50,000
Park front stairs	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
TOTAL	**$ 1,596,697**	**$ (598,874)**	**$ (442,099)**	**$ (1,040,973)**	**$ 555,724**

FLN=Charts 1 & 2 (4-1-04)(Chart 1)

4/1/2004

Chart 2

Public Library
2004-05 Proposed Budget
Base Budget Reductions

	Reduction Plan	Contingency Reductions	Total
Baseline Cuts			
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
Reduce training funds (Admin - HR)	$ 11,880	$ -	$ 11,880
Eliminate access to RLIN bibliographic utility (Techn Srvcs).	$ 600	$ -	$ 600
Reduce funds budgeted for data processing supplies (Info Technology).	$ 20,000	$ -	$ 20,000
Eliminate small equipment (burster) maintenance funds (Techn Srvcs).	$ 1,152	$ -	$ 1,152
Innovacq maintenance service funds (Techn Srvcs).	$ -	$ 20,576	$ 20,576
Eliminate half-time 1630 Acct. Clerk (Admin - FO)	$ -	$ 26,780	$ 26,780
Eliminate 15 hr/week 3602 Page - Borrower Services (Main)	$ -	$ 12,012	$ 12,012
Eliminate half-time Library PageMain's Childrens' Center (OCYS)	$ -	$ 21,000	$ 21,000
Reduce materials & supplies budget (Admin - CL).	$ -	$ 3,000	$ 3,000
Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Total	**$ 254,184**	**$ 132,368**	**$ 386,552**

Susan Hildreth

From: Marcia Schneider
Sent: Friday, March 19, 2004 5:26 PM
To: Susan Hildreth
Subject: FW: History Detectives to shoot here

Susan - FYI.

-----Original Message-----
From: Susan Goldstein
Sent: Friday, March 19, 2004 4:56 PM
To: Tim Wilson; Andrea Grimes; Asa Peavy; Christina Moretta; Elise Wong; Greg Kelly; Jason Baxter; John Eby; Katherine Henry; Mireya Ajoy Wan; Pat Akre; Robert Harrison; Susan Goldstein; Susie Taylor; Tami Suzuki; Thomas Carey
Cc: John Kenny; Kathy Lawhun; Gabrielle Jones; Marcia Schneider
Subject: History Detectives to shoot here

History Detectives, that wonderful PBS show that visits archives and libraries, trying to resolve historical mysteries and inaccuracies, will be shooting in the San Francisco History Center next Wednesday, from 1-5pm. They will be shooting from an 1859 volume of the San Francisco Bulletin for an episode on the Broderick-Terry duel. 3/24

Their crew will consist of 5 people (producer, co-producer, host, camera, and sound people), along with lights, sound and audio equipment. They do need to have the host do some voice-overs during this shoot, so some patrons may be irritated by the noise. I propose that we consider shooting in Book Arts, if it is quiet that day, or we send irritated patrons back to Book Arts for a quieter environment for the duration of the shoot.

Ultimately, however, I think it's fantastic we'll be featured on this show. They just shot an episode at the Bancroft, and they'll be shooting at Society of California Pioneers that morning before they visit us. It's a great show (I'm a fan!) and good exposure for us. Thanks to Tom Carey who assisted them with their initial research here.

Susan Goldstein
City Archivist
San Francisco History Center
San Francisco Public Library
100 Larkin Street
San Francisco, CA 94102
415.557.4567
http://sfpl.org

APRIL 2004 -- FEATURED PROGRAMS AT THE SAN FRANCISCO PUBLIC LIBRARY

+ + + + + + + + + +

April is National Poetry Month. Throughout the month of April the San Francisco Public Library celebrates National Poetry Month with many exciting programs that emphasize the importance of poetry in American culture. For a complete listing of poetry programs at the Library this month, check *At the Public Library.*

+ + + + + + + + + +

1 APRIL, THURSDAY,

French Kiss: Our Enduring Love Affair with France -
Selections from the Schmulowitz Collection of Wit and Humor - An exploration of two hundred years of lively and humorous views of France. Since the eighteenth century, France has been the object of great interest by American writers, humorists and artists who have crossed the Atlantic to write about their experiences, influences and tender attachments; to give tribute to French culture (sometimes grudgingly so) or to write about the quirky confounded nature of the people, known for their liberté, egalité and fraternité.

Exhibition: From April 1 (April Fool's Day!) through July 31, 2004, Main Library, Sixth Floor, Skylight Gallery

+ + + + + + + + + +

3 APRIL, SATURDAY
Ca Dao Vietnam: Vietnamese Folk Poetry-
Poet and translator John Balaban and singer Le Pham Le read and sing Vietnamese folk poetry in the ca dao tradition. Book sale by Book Bay at the Main.

Main Library, Lower Level, Koret Auditorium, 2:00 - 3:00 p.m.

+ + + + + + + + + +

4 April, Sunday
Celebrating the 10th Anniversary of the Democratic Elections in South Africa-
Featuring local activists and speakers. This program also commemorates 35 years since the assassination of Dr. Martin Luther King, Jr.

Main Library, Lower Level, Koret Auditorium, 2:30 p.m.

+ + + + + + + + + +

6 APRIL, TUESDAY
City Reflections: War & Peace on Our Streets -
Join us for the culminating event of San Francisco poet laureate devorah major's project. devorah, Gail Mitchell, Leticia Hernandez, Matthew Shenoda and Dan Bellm read their poetry about San Francisco neighborhoods.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 5:30 - 8:00 p.m.

Related Exhibition: City Reflections - War & Peace on Our Streets A culmination of San Francisco poet laureate devorah major's project City Reflections: War and Peace on our Streets featuring the poetry and poets connected to the project. Through April 30, 2004, Main Library, Sixth Floor

+ + + + + + + + + +

10 APRIL, SATURDAY
Reversing Vandalism: The Art of Altered Books -
Discover the history of this art form with Steve Woodall, artistic director of the San Francisco Center for the Book. Artists Sandra Ortiz Taylor and Mary Marsh show their artistic methodology and artwork.

Main Library, Lower Level, Koret Auditorium, 1:00 - 2:30 p.m.

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21 APRIL, WEDNESDAY
Radar Reading -
Featuring Margo Perrin, Cooper Lee Bombardier and Sparow 13 Laughingwand. Hosted by poetry diva Michelle Tea.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 6:00 p.m.

21 APRIL, WEDNESDAY
Fists on Fire - Poet Jack Hirschman Reads. The author of more than 50 volumes of poetry, essays and translations, his impassioned readings challenge his audience and the American system in which we live.
North Beach Branch, 7:00 p.m.

+ + + + + + + + + +

22 APRIL, THURSDAY
Celebrating Contemporary American Poets -
In celebration of National Poetry Month. Photographer and scholar Lynda Koolish discusses the lives of the Beat writers, poets of the Black Arts movement and writers with other contemporary literary movements.

Main Library, Lower Level, Koret Auditorium, 6:30 p.m.

The 8th Annual Effie Lee Morris Lecture. Does the World Need Another Book? With Nikki Grimes, 2003 Coretta Scott King Book Award Winner.

Main Library, Koret Auditorium, 2:00 p.m.

FOR IMMEDIATE RELEASE
April 1, 2004

CONTACT: Sarah Dalton
916/654-1483

State Librarian of California, Dr. Kevin Starr Retires April 1, 2004

SACRAMENTO — Effective today, April 1, 2004, Dr. Kevin Starr is retiring as State Librarian of California after ten years of service at the California State Library.

Commenting on his tenure at the California State Library, Starr says, "For the past decade, it has been my honor and privilege to serve the people of California through librarianship. In the ten years that I've been State Librarian, I've tried to increase the visibility of the California State Library and the public libraries of California as these institutions serve the people and the heritage of our great state."

Governor Arnold Schwarzenegger has named Starr "State Librarian Emeritus." Governor Schwarzenegger says in an official proclamation to Starr that

> "Your commitment to our state has earned you the respect and deep appreciation of your students, colleagues and fellow Californians. Therefore, it is my distinct honor to bestow on you the title of State Librarian Emeritus."

Starr said it has been his "pleasure to work with Governor Schwarzenegger and First Lady Maria Shriver." "As brief as our relationship has been," Starr says, "I am convinced that they will each find a place of honor in the history of our great state."

About his plans for the future, Starr says he will teach full-time at the University of Southern California, Department of History. Starr reports "three books under contract, one of which will complete my *Americans in the California Dream* series."

Biographical Sketch of Dr. Kevin Starr:

Kevin Starr is the seventh State Librarian of California since 1900. After graduation from the University of San Francisco in 1962, Starr served two years as a lieutenant in a tank battalion in Germany. Upon release from the service, Starr entered Harvard University where he took his MA degree in 1965 and his PhD in 1969 in American Literature. He also holds the Master of Library Science degree from UC Berkeley and has done post-doctoral work at the Graduate Theological Union. Starr has served as the City Librarian of San Francisco.

Starr currently holds the rank of University Professor at the University of Southern California in Los Angeles and, is a contributing editor to the Opinion section of the Los Angeles Times. The author of numerous newspaper and magazine articles, Starr has written ten books, six of which are part of his Americans and the California Dream series. His writing has won him a Guggenheim Fellowship, membership in the Society of American Historians, and the Gold Medal of the Commonwealth Club of California.

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San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

DOCUMENTS DEPT.
SEP - 9 2004
SAN FRANCISCO
PUBLIC LIBRARY

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Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
missioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Minutes of the regular meeting of Thursday, April 1, 2004 (as approved revised June 3, 2004)
The San Francisco Public Library Commission held a regular meeting on Thursday, April 1, 2004 in the Koret Auditorium, Main Library.

The meeting was called to order at 4:20pm.

The following members were present: Commissioners Chin, Coulter, Higueras, and Streets.
Commissioners Steiman and Strobin were excused attendance.
Commissioner Bautista joined the meeting at 5:14pm.

President Higueras announced that the taking of agenda items would be re-ordered so that the RFID Recommendation and the Library Budget items would be heard before the City Librarian's report.

AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public discussed the Board of Supervisors Rules Committee meeting.
Mr. Peter Warfield commented on the Rules Committee meeting, and his Library RSI injuries reports request.
Ms. Deetje Boler spoke about book collection loss replacement, and RFID costs

AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

Public comment on AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

An anonymous member of the public described the Minutes as an "April Fool's" joke.
Mr. Peter Warfield commented on the Minutes lack of detail of comments and discussion.

COMMISSION discussion of AGENDA ITEM #2 APPROVAL OF THE MINUTES OF MARCH 4, 2004

MOTION: by Commissioner Chin, 2nd Commissioner Streets for approval of the Minutes of the regular meeting of March 4, 2004.

Approved by the following vote:

ACTION: 4-0 AYE (Chin, Coulter, Higueras, and Streets)

AGENDA ITEM #4 RFID RECOMMENDATION (taken out of order as previously announced)

Presentation on and discussion of use of a Radio Frequency Identification (RFID) system in the Library in order to reduce workplace injuries and enhance Library operations, and possible action to approve acquisition of RFID-based technology to replace existing barcode based circulation and magnetic security systems, subject to adoption of suitable criteria and policies to protect user privacy.

(Presentations were made by Kathy Lawhun, Chief of the Main Library, and San Francisco Department of Public Health Occupational Health and Safety experts Karen Peckman and Nancy Terranova and by Deputy City Librarian Paul Underwood (copies attached). Materials for these presentations were prepared with the assistance of the Library's RFID Task Force - Kathy Lawhun, Donna Corbeil, David Dodd, David Dale, and Terry Gwiazdowski)

Kathy Lawhun, Chief of the Main Library provided the Library Commissioners with detailed information staff had gathered in response to Commissioner's questions and requests for additional information raised during the Commission's March 4th RFID Forum. Ms. Lawhun presented a bibliography of articles and reports concerning RFID related issues, a brief outline of the most significant facts concerning RFID, and discussed how implementation of RFID could address RSI related staff injuries concerns. San Francisco Department of Public Health specialists Karen Peckman and Nancy Terranova then addressed the staff related health concerns and issues with the safety of RFID raised by members of the public. Deputy City Librarian Paul Underwood then presented a plan of action for RFID implementation and discussed proposed Privacy Policy designed to respond to concerns about potential risks to library users' privacy.

Public comment on AGENDA ITEM #4 RFID RECOMMENDATION

Anonymous member of the public suggested that gift funded portions of the RFID budget could derive from industry sources.
Mr. Peter Warfield opposed to RFID implementation, and found the documentation and policies inadequate.
Ms. Ann Brick, ACLU, opposed implementation and termed an independent review crucial.
Mr. David Molnar clarified his March 4th presentation on RFID.
Mr. Lee Tien, EFF, opposed to RFID implementation, citing potential problems with new technologies.
Ms. Deetje Boler opposed to RFID implementation, and urged consideration of the Precautionary Principle.
Mr. Eric Epson found concerns with RFID privacy risk unrealistic, thinking database security more important.

Commission discussion of AGENDA ITEM #3 RFID RECOMMENDATION

The consensus of the Commission was that staff should prepare additional background materials addressing: various aspects of how RFID would to be implemented by the San Francisco Public Library including consideration of ongoing costs of RSI injuries and loss of collection materials; and policies regarding its use that would need clarification prior to implementation. The City Librarian proposed to provide additional information and bring this item back for Commission action at its May 6th meeting.

A recess was called at 5:34pm
The Public Library Commission returned to session at 5:44pm

President Higueras left the meeting during the recess.

AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An update report on the Library's proposed 2004/05 Budget.

(Library Finance Director George Nichols presented an update report on the overall City and state budget and revenue situation and discussed various contingency budget reduction plans as changes resulting in revenue losses or increased costs to the Library that have or will occur).

Public comment on AGENDA ITEM #4 2004/05 LIBRARY BUDGET

An anonymous member of the public noted that terms used in the report hampered understanding.
Mr. Peter Warfield expressed concerned with priorities for cuts, recommending that the book budget be last to cut.

Commission discussion of AGENDA ITEM #4 2004/05 LIBRARY BUDGET

The Commissioners voiced concern that ongoing preventative building maintenance be continued when possible and raised questions concerning the long-term impact of increasing personnel costs on future budgets.

AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

The City Librarian reported on the following subjects: a hearing about creation of Board appointed library advisory committee at the Board of Supervisor's Rules Committee; Dr. Starr's retirement as State Librarian; reduction in the available funds for Prop 14 (State Library Bond) Cycle 3 grants from $90 to $77 million; a report on PBS History Detectives filming in the San Francisco History center, and programs and exhibits.

Public comment on AGENDA ITEM #3 CITY LIBRARIAN'S REPORT

An anonymous member of the public commented on Prop 14, and Dr. Starr's retirement.

AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

Martín Gómez, Executive Director of the Friends of the Library reported on: the 8th Annual Library Laureates Dinner on April 30; concerning their approval of a $42, 500 grant to fund the Library's 125th Anniversary activities; and consideration of $900,000 in grant requests submitted by library staff for 2004/05.

Public comment on AGENDA ITEM #6 FRIENDS OF THE LIBRARY REPORT

(None offered)

AGENDA ITEM #7 LABOR UNION REPORT

(No report offered)

AGENDA ITEM #8 NEW BUSINESS

(No items were proposed)

AGENDA ITEM #9 ADJOURNMENT

MOTION: by Commissioner Bautista, 2nd Commissioner Chin that the meeting be adjourned.

Approved by the following vote:
4-0 AYE (Bautista, Chin, Coulter, and Streets)

There being no further business, at the hour of 7:17pm the Public Library Commission adjourned.

Michael Housh, Commission Secretary 6/4/04

Please note: Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS to the April 1, 2004 Minutes:

Privacy Policy;
Implementation Plan;
Request for Proposals;
CA Factsheet on EMF (PDF);
RFID & Health Bibliography;
Fast Facts
2004/05 Budget;
April 1, 2004 Report;
Budget Attachments B & C

The City Librarian's Report

Minutes of the regular Commission Meeting of April 1, 2004

Appendix A

Library Commission meeting of March 4, 2004

The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16..

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.

The number of members of the public who spoke anonymously at this meeting. 1

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004
RFID and Health Bibliography

Health and Safety

Organizations

- Amateur Radio RF Safety Calculator. http://n5xu.ae.utexas.edu/rfsafety/
- California Electric and Magnetic Fields Program (Part of the California Department of Health, Environmental Health Investigations Branch.) http://www.dhs.ca.gov/ps/deodc/ehib/emf/
- EMR Network. http://www.emrnetwork.org/
- Federal Communications Commission, Office of Engineering and Technology. Radio Frequency Safety. http://www.fcc.gov/oet/rfsafety/
- International Commission on Non-Ionizing Radiation Protection. http://www.icnirp.org/
- Pacific Gas & Electric, Understanding Electric and Magnetic Fields website. http://www.pge.com/education_training/about_energy/emf/
- San Francisco Neighborhood Antenna-Free Union (SNAFU). http://www.antennafreeunion.org/
- Sutro Tower Community Perspectives. http://www.sutro.org/
- National Institute of Environmental Health Sciences, EMF RAPID (Electric and Magnetic Fields Research and Public Information Dissemination Program) website: http://www.niehs.nih.gov/emfrapid/home.htm
- UC Berkeley Communication and Network Services Radio Frequency Safety. http://radio.cns.berkeley.edu/safety/rf-safety.shtml
- United States Department of Labor, Occupational Safety and Health Administration. Non-Ionizing Radiation: Radiofrequency and Microwave Radiation. http://www.osha.gov/SLTC/radiofrequencyradiation/
- World Health Organization, Electromagnetic Fields. http://www.who.int/peh-emf/en/

Articles and Reports

- About Electromagnetic Fields. World Health Organization online. http://www.who.int/peh-emf/about/en/
- David Banas, "Employee exposure to high level radio frequency radiation." Applied Occupational and Environmental Hygiene, March 17, 2002. http://www.metapress.com/media/99a0hcpddf6qtj914q0x/Contributions/9/W/4/V/9W4VF6U33Y8GLKRF.pdf
- C-K. Chow and J. A. D'Andrea. "Reviews of effects of RF fields on various aspects of human health: Introduction." Bioelectromagnetics, Supplement 6, 2003.
- Robert F. Cleveland, Jr. and Jerry L. Ulcek, "Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields." Federal Communications Commission Office of Engineering and Technology: OET Bulletin 56, August 1999.

http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet56/oet56e4.pdf

- J. Mark Elwood. "Epidemiological studies of radio frequency exposures and human cancer." Bioelectromagnetics, Supplement 6, 2003.
- Brigitta Floderus, Carin Stenlund and Frank Carlgren. "Occupational exposures to high frequency electromagnetic fields in the intermediate range (>300 Hz – 10 MHz)." Bioelectromagnetics, December 2002.
- Kenneth R. Foster, Paolo Vecchia and Michael H. Repacholi, "Risk Management. Science and the precautionary principle." Science, May 12, 2000.
- Frequently Asked Questions about the safety of radiofrequency (RF) and microwave emissions from transmitters and facilities regulated by the FCC. http://www.fcc.gov/oet/rfsafety/rf-faqs.html
- International EMF Project, Fact Sheets and Backgrounders. (Part of the World Health Organization website) http://www.who.int/docstore/peh-emf/publications/facts_press/fact_english.htm
- Norbert Leitgeb and Jorg Schrottner. "Electrosensibility and electromagnetic hypersensitivity." Bioelectromagnetics, September 2003.
- John M. Osepchuk and Ronald C. Petersen. "Historical review of RF exposure standards and the International Committee of Electomagnetic Safety (ICES). Bioelectromagnetics, Supplement 6, 2003.
- "Possible Health Risks to the General Public from the Use of Security and Similar Devices: Executive Summary." Quality of Life, European Commission, [2002]. http://www.icnirp.de/documents/ExSummary.pdf
- Eric van Rongen, et al. "Mobile phones and children: Is precaution warranted?" Bioelectromagnetics, February 2004.
- "Short Factsheet on EMF." California Electric and Magnetic Fields Program, 1999. http://www.dhs.ca.gov/ps/deodc/ehib/emf/shortfactsheet.PDF
- Caroline White, "Risk of Cancer from mobile phones is unclear." British Medical Journal, January 17, 2004. http://bmj.bmjjournals.com/cgi/reprint/328/7432/124-b

San Francisco Public Library
Radio Frequency Identification (RFID) Presentation
Library Commission Meeting
April 1, 2004
Fast Facts about RFID and EMF

- RFID stands for radio frequency identification.
- EMF stands for electromagnetic fields.
- Radio frequency is a type of electromagnetic field made of radio waves.
- Electromagnetic fields are made of electric and magnetic fields.
- Electromagnetic fields are present everywhere on the earth.
- Sources of electromagnetic fields include the sun, thunderstorms, household appliances, cellular phones, and more.
- Electromagnetic fields are defined by their frequency and their wavelength.
- Wavelength refers to the distance between one wave and the next.
- Frequency refers to the number of times the energy vibrates or oscillates.
- The unit of measurement of an electric field is volts per meter (V/m)
- The unit of measurement of a magnetic field is a gauss in the USA and a tesla in Europe.
- The unit of measurement for frequency is a hertz. One hertz is one cycle per second (1 Hz). 1 kHz (kilohertz) is one thousand cycles per second. 1 MHz (megahertz) is one million cycles per second. 1 GHz (gigahertz) is one billion cycles per second.
- Radio frequency constitutes one part of the electromagnetic field range.
- The frequency range of electromagnetic fields runs from 1 Hz-300 GHz).
- The frequency of the RFID tags that SFPL will use is 13.56 MHz.

3/31/04

SAN FRANCISCO PUBLIC LIBRARY
PRIVACY POLICY

Policy Outline

I. Opening statements

- Confidentiality of records
- Intellectual freedom
- Personal information the library collects and does not collect
- Library records protected under California Government Code

II. Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT ACT)

- General information
- Sections 214-216 pertaining to libraries and book stores

III. San Francisco's Response to the USA PATRIOT ACT

- Board of Supervisor's resolution
- Library Commission resolution
- Proposition E, passed by voters March 2, 2004

IV. Public computers

- Computer reservation system and access
- Search stations programmed to delete booking history

V. Computer searching

- Variety of search alternatives
- Users prohibited from searching by barcode

VI. Email and Web forms

- Reference questions, regardless of format of transmission, treated with confidentiality
- Email not necessarily secure against interception and disclosure

VII. Links to other sites

- SFPL not responsible for the privacy practices of other sites

VIII. Library cards and circulation records

- SFPL does not maintain a history of what a library user has previously checked out once books and materials have been returned on time
- When overdue materials are returned and the account is cleared, title information associated with the library card number is deleted
- What information is needed to obtain a library card

IX. Security

- SFPL uses software programs that monitor network traffic to identify unauthorized attempts to upload or change information or otherwise cause damage
- Unauthorized attempts to upload information or change information prohibited under the Computer Fraud and Abuse Act of 1986 and 18 U.S.C. Section 1001 and 1030
- Except for the above purposes, no other attempts are made to identify individual library users or their usage habits

X. Law enforcement

- American judicial system provides the mechanism for seeking release of confidential records
- Library records will not be made available to any agency of the state, federal or local government except pursuant to such process, order or subpoena as may be authorized under the authority of, and pursuant to, federal, state, or local law relating to civil, criminal, or administrative discovery procedures or legislative investigatory power

XI. Information automatically collected and stored

- Types of information automatically gathered for statistical purposes
- Data collected not connected to any personal information or identity

Request for Proposals
San Francisco Public Library
Radio Frequency Identification (RFID) Systems
Proposed Table of Contents

I. Project Description
II. Project Goals
III. Specifications

1. Tags
    - a. data elements encoded
    - b. collision rate
    - c. placement on item
    - d. AV/media
    - e. interchangeability of system
    - f. research on durability & reliability
    - g. specify read/write elements
2. Security
    - a. how secured
    - b. where data stored, no storage of data at gates
    - c. how security will accomplished with 2 systems
3. Conversion/replicating stations
4. Circulation stations
    - a. any proprietary hardware or software
    - b. how works with 2 systems
    - c. read range
    - d. number of items able to be checked out at one time
    - e. ability to circulate if system down
    - f. ergonomic benefits
5. Self-charge stations
    - a. read range
    - b. ability to work with 2 systems
    - c. number of items able to be checked out at one time
    - d. multilingual interfaces
    - e. ergonomic benefits
6. Inventory control
7. Peripheral equipments
    - a. book drops
    - b. patron self-check in stations
    - c. compatibility with sorting systems
    - d. third party vendor products and compatibility
8. Network/Automated Library System Requirements

9. Technical support and maintenance
    a. samples of documentation
    b. what elements are covered
    c. 24/7 support
    d. average time to resolve problems
    e. examples of custom programming
    f. warranties
10. Client references
    a. identify all libraries using system
    b. identify all that libraries that are also Innovative customers
    c. identify non-library clients
11. Other
    a. training required
    b. training provided
    c. any standard used in manufacturing system
    d. vendor participation in establishing standards
    e. list of library automation vendors system compatible with
    f. list any products under development
12. Company information
    a. annual report including statement of revenue
    b. number of employees for RFID operations
    c. sample contract

IV. Cost Proposal
  1. Itemized all items for a complete system
  2. Five year estimate for total cost and any discounts
  3. Phased implementation

V. Submission Requirements
  1. Date due
  2. Number of copies
  3. City & County of San Francisco purchasing & vendor requirements

VI. Selection Criteria

VII. Project Timeline

Attachments

Number of branches, number of items by type, annual circulation

San Francisco Public Library RFID Implementation
Proposed Plan of Action

Follow Berkeley Public Library's Recommended Best Practices:

- Library information on the tag should be limited to the barcode.
- Patrons should not have the ability to search the catalog by barcode.
- Do not utilize wireless connections to communicate between security gates, self-checks or other RFID-reading devices and the ILS database unless more security is incorporated in these communications.
- The implementation of an RFID system only reinforces the current library's duty to make sure their ILS database is as secure from unauthorized entry as possible.
- Do not implement smart-card RFID patron library cards.
- Inform patrons that your library utilizes RFID technology.

Plus

- Consider encryption of barcode data on tags

Action before, during & after RFID implementation:

- Encourage vendors to develop a protocol for formatting and placement of data on the tag while concurrently developing security to ensure privacy (such as encryption). Work with those knowledgeable about emerging technology to provide input and oversight.
- Encourage vendors to use or develop systems where the reader queries the tag first, rather than having the tag broadcast first, or require authentication before data is transmitted.
- Encourage vendors to develop password technology to help ensure that a reader purchased by an unauthorized source is not able to read any tag.
- To protect the library's investment in the technology, chips should be write-able, so that upgrades can be incorporated. Concurrently, security measures should be developed so that there is protection against unauthorized or accidental writing to the tag.
- Monitor the book industry for developments in the preprocessing of books with RFID tags. Book companies could allow much more data on the tag, or could reference the ISBN number on the tag, leading to easier detection of the book title.
- Monitor ongoing health studies.
- Monitor Weblogs and news sources for any RFID developments.
- Encourage development of green manufacturing techniques for tags (see http://www.rfidjournal.com/article/articleview/851/1/1/ for more information).

- Monitor and participate in discussions on RFID with library associations & taskforces (California Library Association, Public Library Association & American Library Association).

Standards Examined:

- **International Organization for Standardization ISO 15693-1** Physical characteristics of RFID labels
- **ISO 15693-2/3** Communication between reader & RFID label
- **NBLC Netherlands Association of Public Libraries** Generic Set of requirements RFID for public libraries
- **European Telecommunications Standards Institute ETSI 300 330** Radio equipment, short range devices, technical characteristics ..for radio equipment in the frequency range 9 kHZ to 25 MHz
- **Code of Federal Regulation 47 CFR Pt.15.225** Emissions from gates & readers
- **Universal Laboratories UL 1950 (to be replaced by UL 60950 by 2005)** Safety of Information Technology Equipment
- **Federal Communications Commission OET Bulletin #63** Understanding the FCC Regulations for Low-Power, Non-Licenses Transmitters
- **ISO Standards being developed ISO 21928** Data elements for RFID in libraries, **ISO 18000-3** Information Technology, radio-frequency identification for item management, parameters for air interface communications at 13.56 MHz

Organizations & experts contacted:

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- California Dept. of Occupation Health & Safety
- California Electric and Magnetic Fields Program
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3/31/04

SHORT FACTSHEET ON EMF

The use of electricity is taken for granted, but people are still concerned about whether powerlines and appliances are safe or unsafe. Here are answers to some common questions about electric and magnetic fields. See also our Web site at http://www.dhs.ca.gov/ps/deodc/ehib/.

What are electric and magnetic fields and why are people concerned about them?

Electric and magnetic fields are a basic force of nature (like gravity), generated by electricity. They are found almost everywhere. Electric and magnetic fields are found in nature, where they are created by such things as lightning and static electricity. Man-made fields are found wherever people use electricity, such as near powerlines and electrical appliances. Like sound, electric and magnetic fields are made of a mixture of components and so can be described in many different ways. Both have wave-like properties such as strength and "frequency" (how often they cycle back and forth). Sound can be loud (strong) or soft (weak), high or low pitched (different frequencies), suddenly loud or constant in tone, and pure or jarring. Similarly, electric and magnetic fields are a mixture of components. They can be strong or weak, have a high or low frequency, have sudden increases in strength ("transients") or a constant strength, and consist of one pure frequency or several (called "harmonics"). For example, the *strength* of a field can be weak and constant, as in most nighttime home environments, or it can be strong and vary from high to low every few seconds, as from an electric blanket set on high.

Powerlines and wiring in buildings and appliances generate 50 and 60 Hertz fields, sometimes referred to as "power frequency" fields. Hertz is the unit for measuring the frequency of fields in the number of wave cycles each second. The lower the frequency of a field, the lower its energy. Power frequency fields are low frequency fields and have low energy levels. Microwave and x-ray fields are high frequency fields and have high energy levels.

Early scientific studies found a link between increased rates of cancer and closeness to certain kinds of powerlines that can cause strong magnetic fields. Over the last two decades concern about the health effects of electric and magnetic fields has increased.

Where does EMF come from?

We are exposed to EMF from many sources, including high voltage transmission lines (usually on metal towers) carrying electricity from generating plants to communities, and distribution lines (usually on wooden telephone poles) that bring electricity to our homes, schools and workplaces. We are also exposed to magnetic fields from wiring in buildings and from all our electric appliances, like TV sets, radios, hair dryers, electric blankets and electric tools.

Most of the fields we experience in a day come from sources other than powerlines, such as wiring and appliances in homes or workplaces. The strength of both electric and magnetic fields decreases as you move away from their source, just as the heat from a campfire decreases with distance. For both electric and magnetic fields strength decreases more quickly with distance from "point" sources like appliances than from "line"

CALIFORNIA ELECTRIC AND MAGNETIC FIELDS PROGRAM
A project of the California Department of Health Services and the Public Health Institute

Gray Davis
Governor
State of California

Grantland Johnson
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Department of Health Services

sources such as powerlines. For example, the magnetic field is down to "background levels" (the naturally occurring amounts) at 3 or 4 feet away from an appliance (*table 1*). It reaches background levels around 60 to 200 feet from a distribution line and about 300 to 1000 feet from a transmission line.

In spite of these similarities, electric fields and magnetic fields have somewhat different properties and possibly different ways of influencing our bodies. Electric fields can be shielded or weakened by trees, buildings and even human skin, but magnetic fields are not so easily blocked. Most recent studies have focused on the health effects of magnetic fields because they are not readily shielded and are easier to measure than electric fields.

Table 1. Examples of magnetic fields at particular distances from appliance surfaces.

	MILLIGAUSS (mG)	
	at 1 foot	at 3 feet
aquarium pump	0.35-18.21	0.01-1.17
band saw	0.51-14.24	0.05-0.75
can opener	7.19-163.02	1.30-6.44
clock	0.34-13.18	0.03-0.68
clothes iron	1.66-2.93	0.25-0.37
coffee machine	0.09-7.30	0-0.61
computer monitor	0.20-134.7	0.01-9.37
copier	0.05-18.38	0-2.39
desktop light	32.81	1.21
dishwasher	4.98-8.91	0.84-1.63
drill press	0.21-33.33	0.03-8.35
fax machine	0.16	0.03
food processor	6.19	0.35
garbage disposal	2.72-7.79	0.19-1.51
hairdryer	0.1-70	0.1-2.8*
microwave oven	0.59-54.33	0.11-4.66
mixer	0.49-41.21	0.09-3.93
portable heater	0.11-19.60	0-1.38
printer	0.74-43.11	0.18-2.45
portable fan	0.04-85.64	0.03-3.12
radio	0.43-4.07	0.03-0.98
range	0.60-35.93	0.05-2.83
refrigerator	0.12-2.99	0.01-0.60
scanner	2.18-26.91	0.09-3.48
sewing machine	3.79-7.70	0.35-0.45
tape player	0.13-6.01	0.01-1.66
television	1.80-12.99	0.07-1.11
toaster	0.29-4.63	0.01-0.47
vacuum	7.06-22.62	0.51-1.28
VCR	0.19-4.63	0.01-0.41
vending machine	0.46-5.05	0.02-0.59

L. Zaffanella, School Exposure Assessment Survey, California EMF Program, interim results, Nov. 1997.

What kind of scientific studies have been done?

Nobody knows for sure whether exposure to 50 and 60 Hertz fields is a health risk. Three kinds of studies have been done to explore this:

1) laboratory studies that expose human or animal cells or organs to fields, looking for biological changes

2) laboratory studies that expose animals to fields, looking for changes in body function, chemistry, behavior or general health

3) "epidemiological" studies that observe people's health and evaluate whether groups that have high or unusual EMF exposure have a greater chance for developing a disease like cancer than groups with "normal" or usual exposures

What do these studies show?

First, *these studies do not show a clear pattern of health hazards*. Some but not all animal and cell studies have shown biological changes linked with *magnetic field* exposure. However, it is not clear whether these biological changes would be the same in humans. Second, it is not clear which component (frequency, strength, harmonics, etc.) of magnetic field exposure might be hazardous.

Concern about possible health hazards from electric power use is supported by results of some scientific studies, but the evidence they provide is still incomplete and inconclusive and even, in some cases, contradictory. A good deal of research is underway to help resolve these questions and uncertainties. Most but not all epidemiological studies show an association between leukemia (a type of cancer) and an "indirect" estimate of high magnetic field exposure such as living very near a type of powerline that could cause of high magnetic fields or working where there is high electrical exposure. These estimates may not really represent a person's true exposure at the critical time period when they may have started developing an illness. Also, these studies show that some estimates of magnetic field exposure might be *related* to cancer, but this does not necessarily mean

that magnetic fields *cause* cancer. Indirect ways of estimating exposure may unintentionally include other risk factors like chemicals used at work or living in a particular neighborhood.

How would magnetic field measurements taken in my house compare to others?

The California Department of Health Services measured the strength of magnetic fields in the bedroom, family room, and kitchen and at the front door of some San Francisco Bay Area houses. Any appliances or electrical devices that were on at the time were left on. As shown in *table 2,* about half of the houses had an average magnetic field level below 0.71 milligauss (mG, the basic unit for measuring magnetic field strength), and 90% of homes had levels below 1.58 mG.

These are measures of the average strength of the 60 Hertz frequency magnetic field at a particular day and time. Field strengths vary with time, day and season depending on electricity use. For example, dinnertime readings are often higher than the middle of the night because appliances are in use. The other magnetic field components (like harmonics of other frequencies and short bursts of stronger fields called transients) are not included in these measurements, so they do not describe other aspects of the fields or other frequencies. Also, the field strength may change over time or distance depending on the location and type of its source.

Table 2. Distribution of average magnetic field strength of San Francisco Bay Area homes.

homes below average field strength	736 homes measured[1]
10%	0.43 mG
25%	0.54 mG
50%	0.71 mG
75%	0.98 mG
90%	1.58 mG

[1] Lee, G., California Exposure Assessment study (preliminary findings). California EMF Program. 1996.

Fairly simple measurements made by a trained technician can show the main indoor or outdoor sources of elevated magnetic fields in a home. Many utility companies and several private businesses can take these measurements. Taking measurements at different distances from powerlines can help show if the lines are sources for elevated magnetic fields inside a home. Turning off the house's main power switch will rule out sources caused by power use inside. In most cases it is possible to find and correct the source of elevated fields if they are due to faulty wiring, grounding problems or choice of lighting fixtures.

What are current government initiatives on EMF?

The State of California

The California Department of Education enacted regulations that require minimum distances between a *new school* and the edge of a transmission line "right-of-way," or the area immediately surrounding lines that utility companies need to access the lines for maintenance and repairs. The setback distances are 100 feet for 50-133 kV lines, 150 feet for 220-230 kV lines, and 350 feet for 500-550 kV lines. These distances were not based on specific biological evidence, but on the known fact that the strength of electric fields from powerlines drops to near background levels at the specified distances, given that no other major sources are present.

In 1993, the California Public Utilities Commission (CPUC) authorized the state's investor-owned utilities to carry out "no and low cost EMF avoidance and measures" in construction of new and upgraded utility projects. The CPUC also established our California EMF research, education, and technical assistance program under the guidance of the Department of Health Services. This program will provide information to assist those responsible for making public policy. However, at present the state of California has no formal rules or guidelines, but advocates "no and low cost" of EMF. This means minimizing EMF exposure when it is easy and inexpensive to do so. Right now there is not enough evidence to justify making regulations governing EMF.

The Federal Government

At the Federal level, the Federal Energy Policy Act of 1992 included a five-year program of electric and magnetic field (EMF) Research and Public Information Dissemination (EMF-RAPID). The EMF-RAPID Program asked these questions: Does exposure to EMF produced by power generation, trans-

mission, and use of electric energy pose a risk to human health? If so, how significant is the risk, who is at risk, and how can the risk be reduced?

In 1998, a working group of experts gathered by the EMF-RAPID Program met to review the research that has been done on the possible health risks associated with EMF. This group reviewed the studies that have been done on the subject, and then voted on whether they believed that exposure to EMF might be a health risk. They then published a report describing their findings. A majority of the scientists on this working group voted that the epidemiology studies of childhood leukemia provide enough evidence to classify EMF as a "possible human carcinogen." This means that, based on the evidence, these researchers believe that it is possible that EMF causes cancer, but they are not sure. They also decided that they did not have enough evidence to determine whether EMF exposure might cause other diseases.

The EMF-RAPID Program released its final report to Congress in 1999. This report explains the program's findings, including the results of its working group and many research projects. The final report states that "the NIEHS believes that there is weak evidence for possible health effects from [power frequency] ELF-EMF exposures, and until stronger evidence changes this opinion, inexpensive and safe reductions should be encouraged." (page 38) For more information on the EMF-RAPID program, or to look at these reports, contact the EMF-RAPID Program, National Institute of Environmental Health Sciences, National Institutes of Health, P.O. Box 12233, Research Triangle Park, North Carolina 27709, or visit their Web site at http://www.niehs.nih.gov/emfrapid. When ordering a copy of the final report, refer to the NIH publication number 99-4493.

Conclusion

Until we have more information, some communities and individuals are adopting the "no and low cost" avoidance strategy. It's easy to move an electric clock a few feet away from a bedside table, and it's simple to sit further away from the computer monitor. Table 1 above shows how quickly EMF decreases as you move away from an appliance. It almost disappears at distances of 3 to 5 feet. It is possible to take measurements in your home to identify sources of EMF, including faulty electrical wiring that can produce elevated magnetic fields and electrical shock. In California, the Public Utilities Commission requires investor-owned utilities to provide magnetic field measurements at no charge to their customers.

Contact us for a more detailed long factsheet. Please send us your questions and comments, too.

CALIFORNIA ELECTRIC AND MAGNETIC FIELDS PROGRAM
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World Health Organization

Summary of health effects of electromagnetic fields.

What happens when you are exposed to electromagnetic fields?

Exposure to electromagnetic fields is not a new phenomenon. However, during the 20th century, environmental exposure to man-made electromagnetic fields has been steadily increasing as growing electricity demand, ever-advancing technologies and changes in social behaviour have created more and more artificial sources. Everyone is exposed to a complex mix of weak electric and magnetic fields, both at home and at work, from the generation and transmission of electricity, domestic appliances and industrial equipment, to telecommunications and broadcasting.

Tiny electrical currents exist in the human body due to the chemical reactions that occur as part of the normal bodily functions, even in the absence of external electric fields. For example, nerves relay signals by transmitting electric impulses. Most biochemical reactions from digestion to brain activities go along with the rearrangement of charged particles. Even the heart is electrically active - an activity that your doctor can trace with the help of an electrocardiogram.

Low-frequency electric fields influence the human body just as they influence any other material made up of charged particles. When electric fields act on conductive materials, they influence the distribution of electric charges at their surface. They cause current to flow through the body to the ground.

Low-frequency magnetic fields induce circulating currents within the human body. The strength of these currents depends on the intensity of the outside magnetic field. If sufficiently large, these currents could cause stimulation of nerves and muscles or affect other biological processes.

Both electric and magnetic fields induce voltages and currents in the body but even directly beneath a high voltage transmission line, the induced currents are very small compared to thresholds for producing shock and other electrical effects.

Heating is the main biological effect of the electromagnetic fields of radiofrequency fields. In microwave ovens this fact is employed to warm up food. The levels of radiofrequency fields to which people are normally exposed are very much lower than those needed to produce significant heating. The heating effect of radiowaves forms the underlying basis for current guidelines. Scientists are also investigating the possibility that effects below the threshold level for body heating occur as a result of long-term exposure. To date, no adverse health effects from low level, long-term exposure to radiofrequency or power frequency fields have been confirmed, ut scientists are actively continuing to research this area.

Biological effects or health effects? What is a health hazard?

Biological effects are measurable responses to a stimulus or to a change in the environment. These changes are not necessarily harmful to your health. For example, listening to music, reading a book, eating an apple or playing tennis will produce a range of biological effects. Nevertheless, none of these activities is expected to cause health effects. The body has sophisticated mechanisms to adjust to the many and varied influences we encounter in our environment. Ongoing change forms a normal part of our lives. But, of course, the body does not possess adequate compensation mechanisms for all biological effects. Changes that are irreversible and stress the system for long periods of time may constitute a health hazard.

An adverse health effect causes detectable impairment of the health of the exposed individual or of his or her offspring; a biological effect, on the other hand, may or may not result in an adverse health effect. ICNIRP guidelines

It is not disputed that electromagnetic fields above certain levels can trigger biological effects. Experiments with healthy volunteers indicate that short-term exposure at the levels present in the environment or in the home do not cause any apparent detrimental effects. Exposures to higher levels that might be harmful are restricted by national and international guidelines. The current debate is centred on whether long-term low level exposure can evoke biological responses and influence people's well being.

Widespread concerns for health

A look at the news headlines of recent years allows some insight into the various areas of public concern. Over the course of the past decade, numerous electromagnetic field sources have become the focus of health concerns, including power lines, microwave ovens, computer and TV screens, security devices, radars and most recently mobile phones and their base stations.

The International EMF Project

In response to growing public health concerns over possible health effects from exposure to an ever increasing number and diversity of electromagnetic field sources, in 1996 the World Health Organization (WHO) launched a large, multidisciplinary research effort. The International EMF Project brings together current knowledge and available resources of key international and national agencies and scientific institutions.

Conclusions from scientific research

In the area of biological effects and medical applications of non-ionizing radiation approximately 25,000 articles have been published over the past 30 years. Despite the feeling of some people that more research needs to be done, scientific knowledge in this area is now more extensive than for most chemicals. Based on a recent in-depth review of the scientific literature, the WHO concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields. However, some gaps in knowledge about biological effects exist and need further research.

Effects on general health

Some members of the public have attributed a diffuse collection of symptoms to low levels of exposure to electromagnetic fields at home. Reported symptoms include headaches, anxiety, suicide and depression, nausea, fatigue and loss of libido. To date, scientific evidence does not support a link between these symptoms and exposure to electromagnetic fields. At least some of these health problems may be caused by noise or other factors in the environment, or by anxiety related to the presence of new technologies.

Effects on pregnancy outcome

Many different sources and exposures to electromagnetic fields in the living and working environment, including computer screens, water beds and electric blankets, radiofrequency welding machines, diathermy equipment and radar, have been evaluated by the WHO and other organizations. The overall weight of evidence shows that exposure to fields at typical environmental levels does not increase the risk of any adverse outcome such as spontaneous abortions, malformations, low birth weight, and congenital diseases. There have been occasional reports of associations between health problems and presumed exposure to electromagnetic fields, such as reports of prematurity and low birth weight in children of workers in the electronics industry, but these have not been regarded by the scientific community as being necessarily caused by the field exposures (as opposed to factors such as exposure to solvents).

Cataracts

General eye irritation and cataracts have sometimes been reported in workers exposed to high levels of radiofrequency and microwave radiation, but animal studies do not support the idea that such forms of eye damage can be produced at levels that are not thermally hazardous. There is no evidence that these effects occur at levels experienced by the general public.

Electromagnetic fields and cancer

Despite many studies, the evidence for any effect remains highly controversial. However, it is clear that if electromagnetic fields do have an effect on cancer, then any increase in risk will be extremely small. The results to date contain many inconsistencies, but no large increases in risk have been found for any cancer in children or adults.

A number of epidemiological studies suggest small increases in risk of childhood leukemia with exposure to low frequency magnetic fields in the home. However, scientists have not generally concluded that these results indicate a cause-effect relation between exposure to the fields and disease (as opposed to artifacts in the study or effects unrelated to field exposure). In part, this conclusion has been reached because animal and laboratory studies fail to demonstrate any reproducible effects that are consistent with the hypothesis that fields cause or promote cancer. Large-scale studies are currently underway in several countries and may help resolve these issues.

Electromagnetic hypersensitivity and depression

Some individuals report "hypersensitivity" to electric or magnetic fields. They ask whether aches and pains, headaches, depression, lethargy, sleeping disorders, and even convulsions and epileptic seizures could be associated with electromagnetic field exposure.

There is little scientific evidence to support the idea of electromagnetic hypersensitivity. Recent Scandinavian studies found that individuals do not show consistent reactions under properly controlled conditions of electromagnetic field exposure. Nor is there any accepted biological mechanism to explain hypersensitivity. Research on this subject is difficult because many other subjective responses may be involved, apart from direct effects of fields themselves. More studies are continuing on the subject.

The focus of current and future **research**
Much effort is currently being directed towards the study of electromagnetic fields in relation to cancer. Studies in search for possible carcinogenic (cancer-producing) effects of power frequency fields is continuing, although at a reduced level compared to that of the late 1990's.

The long-term health effects of mobile telephone use is another topic of much current research. No obvious adverse effect of exposure to low level radiofrequency fields has been discovered. However, given public concerns regarding the safety of cellular telephones, further research aims to determine whether any less obvious effects might occur at very low exposure levels.

Key points

1. A wide range of environmental influences causes biological effects. 'Biological effect' does not equal 'health hazard'. Special research is needed to identify and measure health hazards.
2. At low frequencies, external electric and magnetic fields induce small circulating currents within the body. In virtually all ordinary environments, the levels of induced currents inside the body are too small to produce obvious effects.
3. The main effect of radiofrequency electromagnetic fields is heating of body tissues.
4. There is no doubt that short-term exposure to very high levels of electromagnetic fields can be harmful to health. Current public concern focuses on possible long-term health effects caused by exposure to electromagnetic fields at levels below those required to trigger acute biological responses.
5. WHO's International EMF Project was launched to provide scientifically sound and objective answers to public concerns about possible hazards of low level electromagnetic fields.
6. Despite extensive research, to date there is no evidence to conclude that exposure to low level electromagnetic fields is harmful to human health.
7. The focus of international research is the investigation of possible links between cancer and electromagnetic fields, at power line and radiofrequencies.

(An excerpt from the World Health Organization, “About electromagnetic fields.” http://www.who.int/peh-emf/about/WhatisEMF/en/index.html)

Revised Budget for Phased RFID Implementation

2004-2005 - Year 1 of 6 year implementation plan

- Year 1 would only include items in Excelsior, Main Library AV Center & New materials purchased during the fiscal year
- Library budget would need to cover tags, labels, installation, training, maintenance & tax
- Gift funds would cover equipment for the Main Library
- Branch Capital Campaign funds would cover equipment for Excelsior
- Quotes were obtained from three vendors
- Current budget costs are based on the mid-range quote

Fund Source 2004/2005	Purpose	Cost
Library Budget	296,000 tags: Books/videos/audio @ .55	$162,800
	50,000 tags: DVD/CD @ $1.45	72,500
	346,000 items: Labels @ .04	13,840
	Installation of 8 stations @ $1,794	14,352
	Maintenance for 2 sites @ $3,000	6,000
	Training and miscellaneous	8,263
	Tax	22,244
	Total Library Budget Funds	*299,999*
Gift Funds – Main	2 Self-charge stations @ $9,000	$18,000
	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Main Gift Funds	*51,863*
Branch Capital Campaign	2 Self-charge stations @ $9,000	$18,000
Excelsior	1 Staff circulation station @ $14,000	14,000
	1 Replicating station @ $5,000	5,000
	2 Security gates @ $5,400 per pair	10,800
	Tax	4,063
	Total Branch Capital Campaign Funds	*51,863*
All sources – Total costs		$403,725

Revised Budget for Phased RFID Implementation
2004 – 2010

- Six year implementation plan based on bond schedule and POE schedule for the first floor of the Main Library

Fiscal Year	Purpose	Cost
2004/2005		
▪ Library Budget	346,000 tags, labels, etc.	$299,999
▪ Gift Funds	Main	51,863
▪ Branch Capital Campaign	Excelsior	51,863
▪ *Total Year One – All Sources*		*403,725*
2005/2006		
▪ Library Budget	270,000 tags, labels, etc.	$207,800
▪ Gift Funds	Main – POE	118,600
▪ Branch Capital Campaign	Glen Park, Sunset (2), Western Addition, Mission Bay, West Portal	256,800
▪ *Total Year Two – All Sources*		*583,200*
2006/2007		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Marina, Noe Valley, Eureka Valley, Portola, Ingleside, Park, Bernal Heights, Visitacion Valley	342,400
▪ *Total Year Three – All Sources*		*581,200*
2007/2008		
▪ Library Budget	270,000 tags, labels, etc.	$238,800
▪ Branch Capital Campaign	Oretga, Richmond (2), Potrero, Bayview, North Beach, Merced, Parkside	342,400
▪ *Total Year Four – All Sources*		*581,200*
2008/2009		
▪ Library Budget	270,000 tags, labels, etc.	$197,328
▪ Branch Capital Campaign	Anza, Golden Gate Valley, Presidio	128,400
▪ *Total Year Five – All Sources*		*325,728*
2009/2010		
▪ Library Budget	270,000 tags, labels, etc.	$202,710
▪ Library Budget	Chinatown (2), Mission, Oceanview	171,200
▪ *Total Year Six – All Sources*		*373,910*
Total – Library Budget		**1,556,637**
Total – Gift/Capital Campaign		**1,292,326**
Total – All Sources		**2,848,963**

What is a RSI?

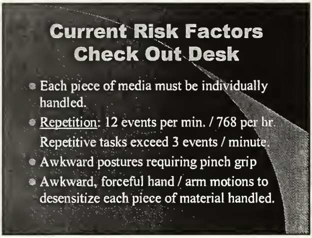
- Repetitive Stress Injury: Also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs).
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels.
- Examples of RSIs are: tendonitis, epicondilitis and carpal tunnel syndrome.

Factors Contributing to RSIs

- RSIs are caused or aggravated by:
  - repetitive motions
  - forceful exertions
  - awkward postures
  - compressive forces
  - vibrations

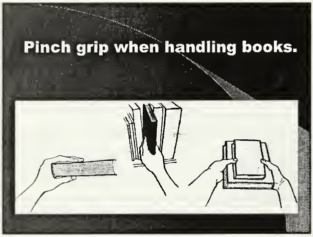
RSI Risk Factors for Circulation Staff

- Repetition – Lifting, turning and opening books and AV materials during check out and check in.
- Forceful Exertion – Pinch grip to pick up books and open VHS cases.
- Awkward Postures – Of shoulders, arms, hands and wrists when handling media.

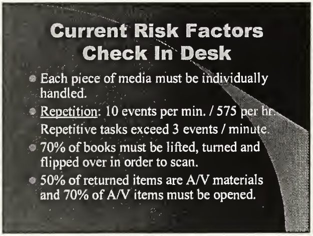


Current Risk Factors
Check Out Desk

- Each piece of media must be individually handled.
- Repetition: 12 events per min. / 768 per hr. Repetitive tasks exceed 3 events / minute.
- Awkward postures requiring pinch grip
- Awkward, forceful hand / arm motions to desensitize each piece of material handled.



Pinch grip when handling books.



Current Risk Factors
Check In Desk

- Each piece of media must be individually handled.
- Repetition: 10 events per min. / 575 per hr. Repetitive tasks exceed 3 events / minute.
- 70% of books must be lifted, turned and flipped over in order to scan.
- 50% of returned items are A/V materials and 70% of A/V items must be opened.

Current Risk Factors Sorting Room

- Excessive grasping and handling to sort and process returns.
- Repetition: 16 events per min. / 940 per hr.

Industrial Injury Rates SFPL

From January 2001 through January 2004:

- 36 reported RSIs
- 260 loss work days
- 500 modified / restricted work days
- $265,000 paid costs

Concluding Remarks

Goal:

- To reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material.
- To set up a system that will allow staff to slide stacks of material instead of lifting each piece.
- Complete the check in and check out process in one easy step.
- RFID would eliminate 75% of handling events. (per Tech Logic Corp.)

RFID Technology and Reducing Risk Factors for RSI Injuries

RSI Definition

- Repetitive Stress Injuries also referred to as Cumulative Trauma Disorders (CTDs), Repetitive Motion Injuries (RMIs) or Musculoskeletal Disorders (MSDs)
- RSIs are disorders of the musculoskeletal and nervous systems caused or aggravated by repetitive motions, forceful exertions, awkward posture and vibration or compressive forces (hard, sharp edges)
- RSIs affect tissues, nerves, tendons, ligaments, joints and supporting blood vessels resulting in pain, tension and strains

General Risk Factors for RSIs among Circulation Staff:

- Repetition: Lifting, turning and opening books and AV materials during check-out and check-in
- Forceful exertion: Required pinch grip when picking up books and media and when opening and processing AV material
- Awkward postures of upper extremities (shoulders, arms, hands and wrists) when handling media

Specific Work Rates and Hazards at the Main Library*:

- Check-out Desk: Awkward postures and excessive handling requiring pinch grip and force to check-out items. Each piece of media must be individually handled. Workload: 12 events per minute/ 768 per hour (Highly repetitive when events exceed 3 per minute). Awkward and forceful hand/arm motions to desensitize material.
- Check-in Desk: Excessive grasping and handling to process returns. Each piece of media must be handled individually and 70% must be opened. 70% of books are being lifted, turned and flipped over in order to scan. Workload: 10 events per minute/ 575 per hour (Highly repetitive when events exceed 3 per minute)
- Sorting Room: Excessive grasping and handling to sort/process returns. Workload: 16 events per minute/ 940 per hour (Highly repetitive when events exceed 3 per minute)

Public Service Employees with Industrial Injuries:

- From January 2001 through January 2004 thirty-six (36) employees whose duties include public service have filed Worker's Compensation claims resulting in 260 loss work days; 500 modified/restricted work days; $265,000 paid costs

Summary:

- Goal is to reduce the repetitive lifting, turning, scanning, desensitizing and opening of each piece of library material and to set up a system that will allow staff to slide material into place and have one motion for check-in and out (RFID).

*Ergonomic consultant report for 1st Floor Remodeling Project & Dept. of Public Health staff

3/02/04

March 29, 2004

TO: Library Commissioners
Susan Hildreth, City Librarian

FR: George Nichols, Finance Director

RE: 2004-05 BUDGET STATUS

On February 19, 2004, the Commission approved the Library's proposed budget of $88.408 million for 2004-05 (Attachment A). The Commission approved the budget with the understanding that increases for health and dental benefits and retirement had not been finalized and that additional changes would be made to the budget once costs were determined. Since the Commission's action, baseline adjustments made by the Controller related to health/dental, retirement, and other issues increased the Library's budget to $88.658 million, resulting in a deficit of $742,149.

Moreover, the Governor's proposed State budget includes a shift of $1.3 billion in statewide local property tax dollars to fund K-14 that could reduce discretionary General Fund (GF) in San Francisco by $54 million and subsequently, the Library's Charter required allocation of GF by $1.220 million. If the Governor's proposed ERAF[1] shift is approved by the Legislature, the Library's shortfall would grow to $1.962 million.

The outcome of the proposed shift will not be known until at least May when the Governor releases his May Revision; and, it may not be known until the Legislature adopts a budget later this summer. The Mayor's Budget Office has not issued instructions regarding contingency plans to cover the loss of revenue resulting from the ERAF shift; however, we must be prepared in case it is approved.

It must be noted, that the current budget and our balancing plan assumes no change in collective bargaining agreements. Our budget assumes that employees will continue to pay the 7.5% retirement; and, that no salary adjustments will be provided. Should either of these assumptions prove to be wrong, additional and more drastic reductions will be required.

To balance the budget, the Library has prepared:

1. A reduction plan to close the $742,000 gap that exists now; and,

2. A contingency reduction plan to cover the potential revenue loss of $1.220 million should the ERAF shift be approved.

The budget reduction plan and the contingency reduction plan are summarized on Attachment B. The underlying goals of both plans are to:

- Balance the budget without layoffs.

- Maintain critical baseline services and minimize impacts on public service.

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[1] Educational Revenue Augmentation Fund (ERAF).

- Provide a viable level of funding for deferred maintenance and computer replacement.

- Maintain and increase if possible, the baseline books and materials budget.

- If approved by the Commission, fund RFID implementation at a reduced level. Includes conversion of collections at Excelsior Branch Library and the Main Library A/V Center. First phase implementation would be funded at $300,000 from the LPF reserve fund.

Reduction Plan to Cover Baseline Cost Increases.

The $742,000 deficit results from the following adjustments made to the budget after it was approved by the Commission and submitted to the Mayor:

- Adoption by the Board of Directors of the San Francisco Retirement System (SFRS) of an employer retirement contribution rate of 4.48% for 2004-05[2]. The baseline budget provided by the Controller included a rate adjustment of 2.4% or $808,000. The 4.48% rate equates $1.506 million or $698,000 more than initially estimated.

- Increase to health/dental plans left unfunded in the budget approved by the Commission in anticipation of additional adjustments that would be made to the budget once all costs and revenue adjustments were known. The increase to health/dental benefits totaled $430,565.

- The Charter amendment enacted in November that established a City Services Auditor function in the Controller's Office. The ordinance requires the Controller to conduct financial auditing, performance auditing, best practice analysis, and special reviews; and, sets aside 0.2% of the budget to fund the program. The Library's assessment is $112,000.

- Actual costs calculated by the City's budget system for proposed new positions and substitutions or reclassifications; and, other miscellaneous system adjustments increased the budget by a net $9,437.

To balance the budget, the Library will withdraw or defer several new funding requests for a savings of $217,000; reduce funding for several new funding requests for a savings of $122,875; utilize accumulated fund balances remaining in a State ILL/DL account to fund a portion of the proposed increase to the book budget saving $259,000; and base budget reductions including a voluntary salary reduction of 15% by the City Librarian, miscellaneous baseline reductions and elimination of the Tool Lending Center grant for savings of $254,184. Specifically,

- Funding will be withdrawn for Millennium ILS upgrades ($60,000); Web Management Software ($10,000); purchase of a delivery truck ($49,000); recruitment materials and supplies ($5,000); roof inspections ($23,000); table repairs ($10,000); and repair of Park Branch stairs ($60,000).

- Funding will be reduced for computer replacements ($75,000); user placed reserves in the Branch system ($25,875); and A/V equipment replacement ($22,000).

- State grant balances from Interlibrary Loan and Direct Loan reimbursements received by the Library prior to 2002-03, will be used to fund $259,000 of the proposed $545,500 increase to the book

budget. Funds will be used specifically for opening day collections in the Branch System. This leaves $206,000 to permanently increase the base books & material budget and $80,000 to purchase books for the BLIP bookmobiles funded by Library Preservation Funds.

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[2] Per the Controller, the increase is due to the Retirement Fund's surplus funded status, lower than anticipated investment returns, and the phasing in of voter-approved retirement benefit increases that require the City to start making contributions. SFRS and the Controller are projecting that rates will increase to 6.48% and 8.48% in 2005-06 and 2006-07, respectively.

- Baseline reductions of $254,184. Includes voluntary 15% salary reduction by City Librarian ($23,252); elimination Tool Lending Center grant ($175,000); and other miscellaneous reductions ($55,932).

Contingency Plan for Loss of $1.2 million General Fund Revenue (ERAF)

Should the Legislature approve the Governor's proposed shift of property tax dollars to K-14, the Library will face an additional shortfall of $1.220 million. To cover the additional shortfall, the Library would withdraw additional new funding requests, make further reductions to new funding requests that remain, make additional cuts in baseline programs, and utilize the LPF reserve to cover the remaining need and mitigate the need to make deep cuts in baseline programs in 2004-05. As currently proposed by the Governor, the ERAF shift would be a permanent realignment of local property tax dollars resulting in an ongoing reduction of GF allocations made to the Library.

Specifically, the Library will:

- Withdraw remaining funds for reserve processing for Branch Libraries ($25,875) and audio-visual equipment replacement ($22,000) for additional savings of $47,875.

- Reduce funding for a full-time Delivery Driver position to a half-time position, saving an additional $25,224.

- Further reduce funding for PC and workstation replacement from $225,000 to $200,000 for additional savings of $25,000.

- Withdraw funds to increase the base books and materials budget for additional savings of $206,000. Budget would still provide $259,000 from ILL/DL reimbursements for opening day collections and $80,500 for the two Branch Library Improvement Program bookmobiles.

- Make additional baseline program cuts for savings of $132,368.

- Use $534,624 from the LPF reserve to cover remaining need and mitigate the need to make deeper baseline program cuts in 2004-05.

Impact of Proposed Balancing Plans on Library Preservation Fund Reserve

The LPF reserve currently has a balance of $2.249 million[3]. To offset the $742,000 deficit caused by additional baseline adjustments made by the Mayor and the Controller, the Library is not using LPF reserve funds. In fact, due to reductions to baseline and new funding proposals that exceed the shortfall, the Library will actually reduce spending from the reserve by $110,000. The Library would use $912,000 from the reserve (reduced from $1.022 million) to support its Capital Improvement Program leaving a balance of $1.336 million (2.5%). Of the $912,000 – $901,426 is for the Main Library POE project and $10,434 is for Deferred Maintenance. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.212 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $1.037 million (1.9%).

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[3] The reserve balance is expected to increase by year-end due to a projected increase in local revenue allocable to the Library under the Charter requirement as reported in the Controller's "FY 2003-04 Six-Month Budget Status Report" issued on February 9, 2004; and, current year appropriation savings a portion of which are credited to the LPF.

To cover the deficit resulting from additional baseline increases and the loss of revenue should the Governor's proposed ERAF shift be approved, the Library in addition to the budget cuts described above, would use a total $1.616 million from the LPF reserve leaving a balance of $632,523 (1.2%). Of the $1.616 million, $901,426 is for the Main Library POE project, $180,000 is for Deferred Maintenance, and $534,624 is to cover the shortfall that remains after making the budget cuts described above. If RFID is approved an additional $300,000 from the reserve would be programmed for a total appropriation of LPF reserve of $1.916 million. Programming an additional $300,000 for RFID from the LPF reserve would leave a balance of $332,523 (0.6%).

The Contingency Reduction Plan requires the use of additional LPF reserves to mitigate the need for deep program cuts in 2004-05. Although, the reserve balance will be seriously depleted if the ERAF shift is approved, the Library would be able to maintain core and mission-critical public services in 2004-05 with minimal loss of jobs and no layoffs. The use of LPF reserves to support the Library's baseline operations is a short-term measure to minimize baseline cuts next year – one of the principal reasons we have labored to maintain a prudent reserve. The impact to the LPF reserve is illustrated on Attachment C.

System-wide Budget Review

In conjunction with the short-term plans to balance the 2004-05 budget, the Library needs to proactively plan for a future that could include further revenue loss (local and state) and more significantly, further growth in baseline costs.[4] During 2004-05, the Library will conduct a comprehensive review of all Library services and programs. The goal of this system-wide review is to look for opportunities to reduce costs by eliminating or reducing non-core programs; to reduce staffing levels through reorganization, consolidation, and redeployment; and to develop a contingency reduction plan for 2005-06. In reducing staffing levels, our goal would be to eliminate positions (vacant) and not people. As stated, cost reductions will probably be necessary to mitigate further erosion in our revenue base; and more significantly, to offset increases in salaries, benefits, work comp, and other baseline costs that are likely in 2005-06.

Given the economic uncertainties and the prospects of City-wide growth in baseline expenditures (i.e., employee compensation), it is not likely that the Library will be allocated General Fund dollars beyond amounts required by the Charter. Consequently, it will be incumbent on the Library and the Commission to conduct this review and to proactively plan for the challenging times that lay ahead.

cc: Paul Underwood, Deputy City Librarian

Attachments

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[4] The Library's employee health/dental plan costs have grown by more than $835,000 ($404,000 in 2003-04 and $431,000 in 2004-05); Worker's Compensation direct costs have increased $426,000 since 2001-02; from $379,000 in 01-02 to a projected $805,000 in 04-05; Retirement costs will increase by $1.5 million in 2004-05. The Controller, the Mayor's Budget Director, and the BoS Budget Analyst in their report to the Mayor titled, "Three-Year General Fund Budget Projection, FY 2004-05 through 2006-07" dated March 19, 2004 project health benefits to increase 15.5% per year in 05-06 and 06-07; retirement contribution to increase 2% per year in 05-06 and 06-07; and worker's compensation to increase significantly in 05-06 and 06-07. Moreover, collective bargaining will significantly impact the budget in the near future. Unions may negotiate restoration of some if not all of the 7.5% retirement that members picked-up in 2003-04 (up to $2.5 million impact); and, salary adjustments could become an issue as no increase was provided in 2003-04. If no increase is provided in 2004-05, increasing salaries could become a major issue and a significant cost.

3/30/2004

Public Library
2004-05 Proposed Budget

	Operating	Capital	Other	Total
USES				
2003-04 AAO	**$ 54,476,188**	**$ 1,118,652**	**$ 1,287,000**	**$ 56,881,840**
One-time	$ (1,112,808)	$ (1,118,652)	$ (1,287,000)	$ (3,518,460)
Retirement Contribution	$ 808,167			$ 808,167
Unemployment	$ 76,278			$ 76,278
Misc. Salary & Fringe Adjustments	$ (10,943)			$ (10,943)
Annualized FTE	$ 66,994			$ 66,994
State Grant (Project Read)	$ 2,619			$ 2,619
Gift Reduction (PIO)	$ (33,377)			$ (33,377)
Substitutions	$ 37,621			$ 37,621
Lease Increases	$ 3,485			$ 3,485
Work Order Changes	$ 127,489	$ -	$ -	$ 127,489
Subtotal Baseline Changes	**$ (34,475)**	**$ (1,118,652)**	**$ (1,287,000)**	**$ (2,440,127)**
Revised Baseline (BPREP)	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Health Benefits (pending)	$ -	$ -	$ -	$ -
Estimated Baseline	**$ 54,441,713**	**$ -**	**$ -**	**$ 54,441,713**
Policy Changes (Attachment A)	$ 1,243,826	$ 31,722,081	$ -	$ 32,965,907
Total Proposed Budget	**$ 55,685,539**	**$ 31,722,081**	**$ -**	**$ 87,407,620**
SOURCES				
LPF & Other Operating Revenue	$ 56,198,600	$ 248,692	$ -	$ 56,447,292
LPF Reserve	$ -	$ 1,022,734		$ 1,022,734
Library Improvement Fund	$ -	$ 1,450,655		$ 1,450,655
Branch Library Improvement Bonds	$ -	$ 29,000,000		$ 29,000,000
Total Sources	**$ 56,198,600**	**$ 31,722,081**	**$ -**	**$ 87,920,681**
Sources less Uses	$ **513,061**	$ -	$ -	$ **513,061**

Note: Budget does not reflect increases in Health Plan premiums which are estimated at 15% or $644,000. Costs will be added to the budget by the Mayor/Controller, once actuals are determined in March/April.

3/30/2004 **Attachment B**

Public Library
2004-05 Proposed Budget

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
Sources/Revenue	**$ 87,916,131**	**$ (1,220,000)**	**$ 86,696,131**
Budget/Expenditures	**$ 88,658,280**	**$ -**	**$ 88,658,280**
Deficit	**$ (742,149)**	**$ (1,220,000)**	**$ (1,962,149)**
Baseline Cuts	**$ 254,184**	**$ 132,368**	**$ 386,552**
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
Reduce training funds (Admin - HR)	$ 11,880	$ -	$ 11,880
Eliminate access to RLIN bibliographic utility (Techn Srvcs).	$ 600	$ -	$ 600
Reduce funds budgeted for data processing supplies (Info Technology).	$ 20,000	$ -	$ 20,000
Eliminate small equipment (burster) maintenance funds (Techn Srvcs).	$ 1,152	$ -	$ 1,152
Innovacq maintenance service funds (Techn Srvcs).	$ -	$ 20,576	$ 20,576
Eliminate half-time 1630 Acct. Clerk (Admin - FO)	$ -	$ 26,780	$ 26,780
Eliminate 15 hr/week 3602 Page - Borrower Services (Main)	$ -	$ 12,012	$ 12,012
Eliminate half-time Library PageMain's Childrens' Center (OCYS)	$ -	$ 21,000	$ 21,000
Reduce materials & supplies budget (Admin - CL).	$ -	$ 3,000	$ 3,000
Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Budget Change Proposals (New Spending)	**$ 598,874**	**$ 442,099**	**$ 1,040,973**
Book Budget	$ 259,000	$ 206,000	$ 465,000
Technology Refreshement	$ 75,000	$ 25,000	$ 100,000
Coldfusion WEB Software	$ 10,000	$ -	$ 10,000
III Millennium Enhancements	$ 60,000	$ -	$ 60,000
Reserve processing (4 HT 3602)	$ 25,874	$ 25,875	$ 51,749
Deferred Maintenance Program	$ -	$ 70,000	$ 70,000
Delivery Truck Driver	$ -	$ 25,224	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ -	$ 49,000
Audio-Visual Equipment	$ 22,000	$ 22,000	$ 44,000
Elevator Maintenance Services	$ -	$ -	$ -
M&S for recruitment (HR).	$ 5,000	$ -	$ 5,000
Roof Inspections	$ 23,000	$ -	$ 23,000
Refinish vandalized wooden tables	$ 10,000	$ -	$ 10,000
M&S OCYS	$ -	$ 8,000	$ 8,000
Main Library windows	$ -	$ 60,000	$ 60,000
Park front stairs	$ 60,000	$ -	$ 60,000
Convert .50 1022 to 1.0	$ -	$ -	$ -
Add .25 3618 (Main)	$ -	$ -	$ -
Library Preservation Fund Reserve	**$ (110,909)**	**$ 645,534**	**$ 534,625**

ESTIMATED REVISED 2004-05 BUDGET			
Sources/Revenue	$ 87,805,222	$ (574,467)	$ 87,230,756
Budget/Expenditures	$ 87,805,222	$ (574,467)	$ 87,230,756
Deficit	$ -	$ -	$ -

FLN=Attachments B and C (4-1-04 Commission Report)(Attachment B)

3/30/2004 Attachment C

Public Library
Proposed 2004-05 Budget
Library Preservation Fund Reserve

	Baseline Cost Increases	ERAF Revenue Shift	Total (Baseline Increase + ERAF)
LPF Reserve Balance (1/23/04)	$ 2,248,572	$ 2,248,572	$ -
Main Library POE	$ (901,426)	$ (901,426)	$ -
Deferred Maintenance	$ (10,434)	$ (180,000)	$ (169,566)
Remaining Base Deficiency (Fund from LPF Reserve)	$ -	$ (534,625)	$ (534,625)
Remaining Balance	$ 1,336,712	$ 632,522	$ (704,191)
RFID	$ (300,000)	$ (300,000)	$ -
Remaining Balance	$ 1,036,712	$ 332,522	$ (704,191)
	1.9%	0.6%	

Pu Library

2004-05 posed Budget

Budget Change Proposals (New Funding Initiatives)

	Budgeted	Reduction Plan	Contingency Reductions	Total Reductions	Balance
Book Budget	$ 545,500	$ (259,000)	$ (206,000)	$ (465,000)	$ 80,500
Technology Refreshement	$ 300,000	$ (75,000)	$ (25,000)	$ (100,000)	$ 200,000
Coldfusion WEB Software	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
III Millennium Enhancements	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
Reserve processing (4 HT 3602)	$ 51,749	$ (25,874)	$ (25,875)	$ (51,749)	$ -
Deferred Maintenance Program	$ 200,000	$ -	$ (70,000)	$ (70,000)	$ 130,000
Delivery Truck Driver	$ 50,448	$ -	$ (25,224)	$ (25,224)	$ 25,224
Delivery Truck (CNG)	$ 49,000	$ (49,000)	$ -	$ (49,000)	$ -
Audio-Visual Equipment	$ 44,000	$ (22,000)	$ (22,000)	$ (44,000)	$ -
Elevator Maintenance Services	$ 70,000	$ -	$ -	$ -	$ 70,000
M&S for recruitment (HR).	$ 5,000	$ (5,000)	$ -	$ (5,000)	$ -
Roof Inspections	$ 23,000	$ (23,000)	$ -	$ (23,000)	$ -
Refinish vandalized wooden tables	$ 10,000	$ (10,000)	$ -	$ (10,000)	$ -
M&S OCYS	$ 8,000	$ -	$ (8,000)	$ (8,000)	$ -
Main Library windows	$ 110,000	$ -	$ (60,000)	$ (60,000)	$ 50,000
Park front stairs	$ 60,000	$ (60,000)	$ -	$ (60,000)	$ -
TOTAL	$ **1,596,697**	$ **(598,874)**	$ **(442,099)**	$ **(1,040,973)**	$ **555,724**

FLN=Charts 1 & 2 (4-1-04)(Chart 1)

4/1/2004

Chart 2

Public Library
2004-05 Proposed Budget
Base Budget Reductions

	Reduction Plan	Contingency Reductions	Total
Baseline Cuts			
15% voluntary salary reduction - City Librarian	$ 23,252	$ -	$ 23,252
Eliminate grant to Tool Lending Center (Branch)	$ 175,000	$ -	$ 175,000
Reduce materials & supplies budgets for all crafts (Operations).	$ 20,000	$ -	$ 20,000
Reduce operating funds 20% (Admin - FO)	$ 2,300	$ -	$ 2,300
Reduce training funds (Admin - HR)	$ 11,880	$ -	$ 11,880
Eliminate access to RLIN bibliographic utility (Techn Srvcs).	$ 600	$ -	$ 600
Reduce funds budgeted for data processing supplies (Info Technology).	$ 20,000	$ -	$ 20,000
Eliminate small equipment (burster) maintenance funds (Techn Srvcs).	$ 1,152	$ -	$ 1,152
Innovacq maintenance service funds (Techn Srvcs).	$ -	$ 20,576	$ 20,576
Eliminate half-time 1630 Acct. Clerk (Admin - FO)	$ -	$ 26,780	$ 26,780
Eliminate 15 hr/week 3602 Page - Borrower Services (Main)	$ -	$ 12,012	$ 12,012
Eliminate half-time Library PageMain's Childrens' Center (OCYS)	$ -	$ 21,000	$ 21,000
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Reduce materials & supplies budget (Main).	$ -	$ 4,000	$ 4,000
Reduce reproduction funds (Public Affairs)	$ -	$ 5,000	$ 5,000
Reduce supply and equipment budget 3% (Branch).	$ -	$ 40,000	$ 40,000
Total	**$ 254,184**	**$ 132,368**	**$ 386,552**

Susan Hildreth

From: Marcia Schneider
Sent: Friday, March 19, 2004 5:26 PM
To: Susan Hildreth
Subject: FW: History Detectives to shoot here

Susan - FYI.

-----Original Message-----
From: Susan Goldstein
Sent: Friday, March 19, 2004 4:56 PM
To: Tim Wilson; Andrea Grimes; Asa Peavy; Christina Moretta; Elise Wong; Greg Kelly; Jason Baxter; John Eby; Katherine Henry; Mireya Ajoy Wan; Pat Akre; Robert Harrison; Susan Goldstein; Susie Taylor; Tami Suzuki; Thomas Carey
Cc: John Kenny; Kathy Lawhun; Gabrielle Jones; Marcia Schneider
Subject: History Detectives to shoot here

History Detectives, that wonderful PBS show that visits archives and libraries, trying to resolve historical mysteries and inaccuracies, will be shooting in the San Francisco History Center next Wednesday, from 1-5pm. They will be shooting from an 1859 volume of the San Francisco Bulletin for an episode on the Broderick-Terry duel. 3/24

Their crew will consist of 5 people (producer, co-producer, host, camera, and sound people), along with lights, sound and audio equipment. They do need to have the host do some voice-overs during this shoot, so some patrons may be irritated by the noise. I propose that we consider shooting in Book Arts, if it is quiet that day, or we send irritated patrons back to Book Arts for a quieter environment for the duration of the shoot.

Ultimately, however, I think it's fantastic we'll be featured on this show. They just shot an episode at the Bancroft, and they'll be shooting at Society of California Pioneers that morning before they visit us. It's a great show (I'm a fan!) and good exposure for us. Thanks to Tom Carey who assisted them with their initial research here.

Susan Goldstein
City Archivist
San Francisco History Center
San Francisco Public Library
100 Larkin Street
San Francisco, CA 94102
415.557.4567
http://sfpl.org

APRIL 2004 -- FEATURED PROGRAMS AT THE SAN FRANCISCO PUBLIC LIBRARY

+ + + + + + + + + +

April is National Poetry Month. Throughout the month of April the San Francisco Public Library celebrates National Poetry Month with many exciting programs that emphasize the importance of poetry in American culture. For a complete listing of poetry programs at the Library this month, check *At the Public Library.*

+ + + + + + + + + +

1 APRIL, THURSDAY,

French Kiss: Our Enduring Love Affair with France -
Selections from the Schmulowitz Collection of Wit and Humor - An exploration of two hundred years of lively and humorous views of France. Since the eighteenth century, France has been the object of great interest by American writers, humorists and artists who have crossed the Atlantic to write about their experiences, influences and tender attachments; to give tribute to French culture (sometimes grudgingly so) or to write about the quirky confounded nature of the people, known for their liberté, egalité and fraternité.

Exhibition: From April 1 (April Fool's Day!) through July 31, 2004, Main Library, Sixth Floor, Skylight Gallery

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3 APRIL, SATURDAY
Ca Dao Vietnam: Vietnamese Folk Poetry-
Poet and translator John Balaban and singer Le Pham Le read and sing Vietnamese folk poetry in the ca dao tradition. Book sale by Book Bay at the Main.

Main Library, Lower Level, Koret Auditorium, 2:00 - 3:00 p.m.

+ + + + + + + + + +

4 April, Sunday
Celebrating the 10th Anniversary of the Democratic Elections in South Africa-
Featuring local activists and speakers. This program also commemorates 35 years since the assassination of Dr. Martin Luther King, Jr.

Main Library, Lower Level, Koret Auditorium, 2:30 p.m.

+ + + + + + + + + +

6 APRIL, TUESDAY
City Reflections: War & Peace on Our Streets -
Join us for the culminating event of San Francisco poet laureate devorah major's project. devorah, Gail Mitchell, Leticia Hernandez, Matthew Shenoda and Dan Bellm read their poetry about San Francisco neighborhoods.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 5:30 - 8:00 p.m.

Related Exhibition: City Reflections - War & Peace on Our Streets A culmination of San Francisco poet laureate devorah major's project City Reflections: War and Peace on our Streets featuring the poetry and poets connected to the project. Through April 30, 2004, Main Library, Sixth Floor

+ + + + + + + + + +

10 APRIL, SATURDAY
Reversing Vandalism: The Art of Altered Books -
Discover the history of this art form with Steve Woodall, artistic director of the San Francisco Center for the Book. Artists Sandra Ortiz Taylor and Mary Marsh show their artistic methodology and artwork.

Main Library, Lower Level, Koret Auditorium, 1:00 - 2:30 p.m.

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21 APRIL, WEDNESDAY
Radar Reading -
Featuring Margo Perrin, Cooper Lee Bombardier and Sparow 13 Laughingwand. Hosted by poetry diva Michelle Tea.

Main Library, Lower Level, Latino/Hispanic Community Meeting Room, 6:00 p.m.

21 APRIL, WEDNESDAY
Fists on Fire - Poet Jack Hirschman Reads. The author of more than 50 volumes of poetry, essays and translations, his impassioned readings challenge his audience and the American system in which we live.
North Beach Branch, 7:00 p.m.

+ + + + + + + + + +

22 APRIL, THURSDAY
Celebrating Contemporary American Poets -
In celebration of National Poetry Month. Photographer and scholar Lynda Koolish discusses the lives of the Beat writers, poets of the Black Arts movement and writers with other contemporary literary movements.

Main Library, Lower Level, Koret Auditorium, 6:30 p.m.

The 8th Annual Effie Lee Morris Lecture. Does the World Need Another Book? With Nikki Grimes, 2003 Coretta Scott King Book Award Winner.

Main Library, Koret Auditorium, 2:00 p.m.

FOR IMMEDIATE RELEASE
April 1, 2004

CONTACT: Sarah Dalton
916/654-1483

State Librarian of California, Dr. Kevin Starr Retires April 1, 2004

SACRAMENTO – Effective today, April 1, 2004, Dr. Kevin Starr is retiring as State Librarian of California after ten years of service at the California State Library.

Commenting on his tenure at the California State Library, Starr says, "For the past decade, it has been my honor and privilege to serve the people of California through librarianship. In the ten years that I've been State Librarian, I've tried to increase the visibility of the California State Library and the public libraries of California as these institutions serve the people and the heritage of our great state."

Governor Arnold Schwarzenegger has named Starr "State Librarian Emeritus." Governor Schwarzenegger says in an official proclamation to Starr that

> "Your commitment to our state has earned you the respect and deep appreciation of your students, colleagues and fellow Californians. Therefore, it is my distinct honor to bestow on you the title of State Librarian Emeritus."

Starr said it has been his "pleasure to work with Governor Schwarzenegger and First Lady Maria Shriver." "As brief as our relationship has been," Starr says, "I am convinced that they will each find a place of honor in the history of our great state."

About his plans for the future, Starr says he will teach full-time at the University of Southern California, Department of History. Starr reports "three books under contract, one of which will complete my *Americans in the California Dream* series."

Biographical Sketch of Dr. Kevin Starr:

Kevin Starr is the seventh State Librarian of California since 1900. After graduation from the University of San Francisco in 1962, Starr served two years as a lieutenant in a tank battalion in Germany. Upon release from the service, Starr entered Harvard University where he took his MA degree in 1965 and his PhD in 1969 in American Literature. He also holds the Master of Library Science degree from UC Berkeley and has done post-doctoral work at the Graduate Theological Union. Starr has served as the City Librarian of San Francisco.

Starr currently holds the rank of University Professor at the University of Southern California in Los Angeles and, is a contributing editor to the Opinion section of the Los Angeles Times. The author of numerous newspaper and magazine articles, Starr has written ten books, six of which are part of his Americans and the California Dream series. His writing has won him a Guggenheim Fellowship, membership in the Society of American Historians, and the Gold Medal of the Commonwealth Club of California.

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San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

NOTICE OF MEETING

A regular meeting of the San Francisco Public Library Commission will be held as follows:

DATE: Thursday, April 15, 2004
TIME: 4:00 PM
PLACE: Koret Auditorium, Main Library, lower level

The meeting will be called to order.

1. PUBLIC COMMENT

(This item is to allow members of the public to comment generally on matters within the Commission's purview as well as to suggest new agenda items for the Library Commission's consideration.)

2. WIRELESS NETWORK DEMONSTRATION DISCUSSION

Presentation and discussion of a wireless internet network demonstration for the Library.

Explanatory document: Public Wireless Internet Network Demonstration at SFPL.

3. WEST PORTAL BRANCH PEER REVIEW DISCUSSION

Presentation of and discussion of a peer review of proposed designs for the West Portal Branch Library.

Explanatory document: West Portal Branch renovation FAQs

4. APPROVAL OF THE MINUTES ACTION

Presentation of, discussion of, and possible action to approve the Minutes of the regular Commission meeting of February 19, 2004.

Explanatory document: draft Minutes

5. BOND PROGRAM MANAGER'S REPORT DISCUSSION

(This is a discussion item to allow the Branch Library Bond Program Manager to report on recent bond program related activities and make announcements.)

This report will consist of *an informational presentation*: none; *regular reports*: program budget and schedule; active projects; and community outreach; and *special reports;* none.

Explanatory documents: current Budget Report and Branch Library Summary Schedules

6. ADJOURNMENT (requires motion and public comment) ACTION

4/12/04 - M. Housh, Commission Secretary

Explanatory documents: Copies of listed explanatory documents are available as follows: (1) from the Commission Secretary/Custodian of Records, Main Library, 6th Floor, (2) in the rear of the Koret Auditorium immediately before and during the meeting, and (3)to the extent possible, on the Library's website at http://sfpl.org/.

Additional materials not listed as explanatory documents on this agenda, if any, that are distributed to the Library Commissioners prior to or during the meeting in connection with any agenda item will be available to the public for inspection and copying in accordance with Government Code Section 54954.1 and Sunshine Ordinance §§ 67.9, 67.28(b)& 67.28(d).

SAN FRANCISCO PUBLIC LIBRARY COMMISSION - Accessible Meetings Policy

To ensure the participation of the disabled public in all Commission public meetings, the following items concerning accessibility will be available:

Sign Language interpreters or note takers will be available upon request. Please contact Services for the Deaf and Hearing Impaired at 415/557-4433 (TDD) or 415/557-4434 (Voice) at least 48 hours prior to the meeting. Late requests will be honored if possible.

A sound enhancement system will be available upon request at the meetings. Please contact Services for the Deaf and Hearing Impaired at 415/557-4433 (TDD) or 415/557-4434 (Voice) at least 48 hours prior to the meeting. late requests will be honored if possible.

A person who is deaf or hearing impaired may gain meeting information prior to the meeting by calling 415/557-4433 (TDD) or 415/557-4434 (Voice). In addition, the California Relay Service can be used by individuals with hearing and speech impairments by calling 1-800/735-2929 (TDD) or 1-800/735-2992 (Voice).

Minutes of the meetings are available in alternative formats. If you require the use of a reader during the meeting, please contact the Library for the Blind and Print Handicapped at 415/557-4253 at least 48 hours in advance of the need.

Individuals with severe allergies, environmental illness, multiple chemical sensitivity or related disabilities should call the accessibility hotline at 415/554-8925 to discuss meeting accessibility. In order to assist San Francisco's efforts to accommodate such people, attendees at public meetings are reminded that other attendees may be sensitive to various chemical-based products. Please help the City to accommodate these individuals.

Library Commission meetings will be held at the Main Library, 100 Larkin Street at Grove, Lower Level, Koret Auditorium, except when otherwise noticed. The Commission meeting room is wheelchair accessible. The closest accessible BART station is Civic Center. The accessible MUNI line serving this location is the #19 Polk. For information about Muni's accessible service, please call 415/923-6142.

There is accessible parking available at 355 McAllister, Civic Center Plaza Garage. Call 415/863-1537.

Accessible seating for persons with disabilities (including those using wheelchairs) will be available at meetings.

The ringing of and use of cell phones, pagers and similar sound-producing electronic devices are prohibited at this meeting. Please be advised that the Chair may order the removal from the meeting room of any person(s) responsible for the ringing or use of a cell phone, pager, or other similar sound producing electronic devices.

Know Your Rights Under The Sunshine Ordinance

Government's duty is to serve the public, reaching its decisions in full view of the public. Commissions, boards, councils and other agencies of the City and County exist to conduct the people's business. This ordinance assures that deliberations are conducted before the people and that City operations are open to the people's review.

For more information on your rights under the Sunshine Ordinance (Chapter 67 of the San Francisco Administrative Code) or to report a violation of the ordinance, contact Donna Hall, Administrator, the Sunshine Ordinance Task Force, City Hall, Room 409 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102-4689 or at 415/554-7724 ph. 415/554-5163 FAX and website at Donna_Hall@sfgov.org. Copies of the Sunshine Ordinance can be obtained from the Clerk of the Sunshine Task Force, the San Francisco Public Library and on the City's website at www.sfgov.org/Sunshine

San Francisco Lobbyist Ordinance

Attention: Individuals and entities that influence or attempt to influence local legislative or administrative action may be required by the San Francisco Lobbyist Ordinance [SF Campaign & Governmental Conduct code sec. 2.100] to register and report lobbying activity. For more information about the Lobbyist Ordinance, please contact the Ethics Commission at 30 Van Ness Avenue, Suite 3900, San Francisco, CA 94102, telephone (415) 581-2300, fax (415) 581-2317 and web site: sfgov.org/ethics.

Michael Housh, Commission Secretary 9/11/03

PUBLIC WIRELESS INTERNET NETWORK DEMONSTRATION
AT THE
SAN FRANCISCO PUBLIC LIBRARY

An open-ended trial of a public wireless Internet network will begin soon on the 4th Floor of the Main Library. Users with their own laptops can access this free service to browse the Internet, send email and search the Library catalog and licensed databases. Laptop owners will free up time on the heavily-booked Library computers, allowing more access for other users.

Key features of the demonstration:

- 3 access points on 4th Floor
- Range of signal is 150 feet from access points. Obstructions such as book shelves, windows, & desks lessen the signal
- Unlimited simultaneous users
- Any user with a WiFi-compliant 802.11b wireless Ethernet device installed in a laptop or a laptop with built-in WiFi capability can use the network
- Access will be available all hours that Main Library is open
- Wireless LAN service has separate DSL line and is not connected to the Library's network
- Statistics on usage will be gathered – number of users per day & length of sessions
- Signage at all Main Library entrances and on the 4th floor will inform the public of the network.
- As with users who currently bring laptops to the Library to connect to our network with cables, we will not provide technical support.
- Basic instructions on how to connect to the network wireless LAN service will be posted in seating areas within the range of the signal.
- The Library's website will include information about this service.
- A Limitations and Disclaimer Statement will be posted with proposed text:

  > The Library's wireless network is not secure. Information sent from or to your laptop can be captured by anyone else with a wireless device and the appropriate software, within three hundred feet. Library staff is not able to provide technical assistance and no guarantee can be provided that you will be able to make a wireless connection. The Library assumes no responsibility for the safety of equipment or for laptop configurations, security, or data files resulting from connection to the Library's network.

- Local libraries currently using WiFi access:

  Foster City
  Half Moon Bay
  Menlo Park
  Palo Alto
  Redwood City
  Santa Clara University
  Sonoma County
  Sonoma State
  University of San Francisco

4/12/04

BRANCH LIBRARY
IMPROVEMENT PROGRAM

City & County of San Francisco
Branch Library Improvement Program

West Portal Branch Library Renovation
Frequently Asked Questions

Q. What are the plans for the branch?
A. The Library plans to make the building accessible, and reduce the seismic risk while preserving the historic character of the existing building. A small expansion at the rear of the building to recoup space needed for disabled access and seismic work is included. Also, an elevator will be added and the staff areas enhanced for greater functionality.

Q. What will be some of the benefits of the renovated branch?

- Seismic strengthening
- New restrooms
- A safe accessible elevator with an entrance from Ulloa Street
- New after hours book drop on Ulloa Street at ground level
- Improved landscaping
- Better staff work areas both upstairs and downstairs
- A designated teen area
- Better lighting
- New or restored furniture
- Clearer signage
- New computers
- Flexible Children's Room for easier programs
- Enhanced historic features such as lights, ceiling stencils, and woodwork
- New self-check machines
- A variety of seating choices
- Improved heating and ventilation

Q. When will the branch be closed and for how long?
A. The branch is scheduled to close for construction in late 2004 and reopen in fall 2006 or earlier. During the renovation, library services will be provided by increasing hours at nearby branches, holding programs at neighborhood schools and community centers, and by bookmobile service.

Q. The West Portal Branch was closed in 2002. Why close it again?
A. The only improvement was a much needed electrical upgrade. This time there will be a complete renovation.

Q. Who are the architects?

A. Thomas Hacker Architects Inc., of Portland, Oregon and Karin Payson Architects + Design of San Francisco.

Q. Will the amount of books increase?

A. The materials (books, CDs, DVDs, videos, books on tape, etc.) collection will remain the same. However, materials may be easier to find on new shelves in an improved layout. The addition of space will go for increased accessibility and new restrooms.

Q. What happens to the existing furniture?

A. Some historic pieces may be restored, but most of the furniture will be replaced. The Library has developed interior design guidelines to help the architects and staff choose appropriate furniture based on functionality, ergonomics, durability, maintenance, flexibility, sustainability, as well as the architectural period.

Q. Is the community involved in the design process?

A. Yes. A survey was conducted in September/October 2003, where 598 people gave their opinion about materials, facilities, and services at the branch. Two community meetings were held at the branch to discuss conceptual designs (November 2003 & April 2004). Before the plans are finalized, the Library Commission will hold a public Peer Review where an independent architect, planner or historic preservationist, and an interior designer review the design. Then the architects will go back to the community to discuss the final plans.

Q. Where does the money come from to renovate the branch?

A. In November 2000, the voters overwhelmingly passed a bond measure for $106 million to upgrade San Francisco's branch library system. The bond's priorities are to reduce seismic risk, meet modern technological needs and current code requirements, comply with the Americans with Disabilities Act (ADA), and provide spaces that are responsive to current services, yet flexible enough to meet future needs. In addition, while the bond pays for a significant portion of the costs, it does not pay for furniture, fixtures, and equipment. The Friends of the San Francisco Public Library will raise $16 million from private donations to pay for these costs. Call (415) 437-4859 to help with the Friends campaign.

Q. How much does construction cost for the West Portal Branch?

A. The project has a construction budget of $2.7 million to renovate and expand the existing building.

Q. How do I find out more information about my branch renovation?

A. Contact the Branch Library Improvement Program at (415) 557-4354, check www.sfpl.org, or email BLIP@sfpl.org.

4/12/2004

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SAN FRANCISCO PUBLIC LIBRARY

San Francisco Public Library Commission
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Deborah Strobin
issioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Draft Minutes of the regular meeting of Thursday, April 15, 2004.
The San Francisco Public Library Commission held a regular meeting on Thursday, April 15, 2004, in the Koret Auditorium, Main Library.

The meeting was called to order at 4:08 pm.

The following members were present: Bautista, Coulter, Higueras, and Steiman, Commissioners Streets and Strobin were reported excused.

AGENDA ITEM #1 PUBLIC COMMENT

Public comment on AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public commented on discussion of a library citizen advisory committee at the Board of Supervisors Rules Committee.
Mr. Peter Warfield noted a lack of explanatory documents and commented on the Rules Committee meeting.
Mr. David Pilpel, member–elect, Sunshine Ordinance Task Force, offered suggestions for improvements to the meeting minutes modeled on those used by the Ethics Commission.
Ms. Rhoda Meer urged retention and reuse of the original chairs in the renovation of the West Portal Branch Library.

AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

(Presented by Library Chief of Automation Vivian Pisano and Chief of the Main Library Kathy Lawhun with additional information by Mr. Tim Pozar, BARWN (Bay Area Wireless Network)

Presentation and discussion of a wireless internet network demonstration for the Library.

Public comment on AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

An anonymous member of the public found no need for such a demonstration, questioned how it would be assessed, and asked what trade-off of other library services would be necessary to provide it.
Mr. Peter Warfield decried that lack of explanatory documents available prior to the meeting and criticized what he found to be a lack of detail about the proposed wireless demonstration.
Ms. Traci Hughes expressed concern with the possible health effects of use of the technology; noted potential lawsuits; and urged the Commissioners to consider the Board of Supervisors' Precautionary Principle concerning use of new technologies.

Q. Who are the architects?
A. Thomas Hacker Architects Inc., of Portland, Oregon and Karin Payson Architects + Design of San Francisco.

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4/12/2004

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Ms. Traci Hughes expressed concern with the possible health effects of use of the technology; noted potential lawsuits; and urged the Commissioners to consider the Board of Supervisors' Precautionary Principle concerning use of new technologies.

Commission discussion of AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

In response to a query by President Higueras, library staff reported that the proposed demonstration project was in response to many library users' requests for wireless access availability at the Main Library and in branch libraries. The Deputy City Librarian confirmed that only minimal cost would be incurred by making the proposed wireless access available. Mr. Underwood additionally noted potential for a great many users that in turn could result in freeing more of the Library's wired computers for other users. It was a consensus of the Commission that there was significant value in providing the proposed wireless access. Vice President Steiman and Commissioner Coulter suggested that staff report back to the Commission at a future date concerning the results of the demonstration and levels of use of the new wireless access.

Due to the delayed arrival of a member of the Peer Review Panel, President Higueras took up Agenda Item #4 Approval of the Minutes and Agenda Item #5 the BLIP Manager's Report next.

AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

Public comment on AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

An anonymous member of the public found that the brevity of detail in these Minutes inhibited understanding of the real meaning of public comments offered, citing as example reported comments by Mr. Warfield.
Peter Warfield found the Minutes reporting too brief to reflect accurately comment offered, citing as example comments he had made about online catalog problems.

Commission discussion of AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

Commissioner Coulter suggested that in future complete sentences be used to describe reported public comments.

MOTION: Commissioner Bautista, 2nd Commissioner Coulter for approval of the Minutes of the regular Commission meeting of February 19, 2004.

Adopted by the following vote:
AYE 4-0 (Bautista, Coulter, Higueras, and Steiman)

AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

(Presented by Branch Library Improvement Program Manager Marilyn Thompson)
(This is a discussion item to allow the Branch Library Bond Program Manager to report on recent bond program related activities and make announcements.)
This report will consist of *an informational presentation*: none *regular reports*: program budget and schedule; active projects; and community outreach; and *special reports;* none.

Public comment on AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

An anonymous member of the public noted that copies of the BLIP Budget and Schedule Reports that this person received were poor black and white reproductions of the larger colored copies made available to the Commissioners and were unreadable.

Commission discussion of AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

President Higueras recommended use of charts that could be easily read in black and white reproduction. He then noted that Library staff should continue to go forward with plans for renovation of the North Beach Branch Library should a community consensus did not soon develop in the wake of the neighborhood controversy concerning expansion of the North Beach Playground. There followed a brief discussion use of the original wooden chairs and preservation of period detail in the planned renovation of the West Portal Branch Library.

President Higueras called a brief recess at 5:51pm.
The Commission reconvened at 5:59pm.

AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

(The Peer Review Panel presentation consisted of an introduction by BLIP Manager Marilyn Thompson., the architects' presentation by Kacey Jurgens, Principle, Thomas Hacker Architects Inc, and Karin Payson, Principle, Karin Payson architecture + design, a Library response to the proposed design by Deputy City Librarian Paul Underwood, and concluded with the expert Peer Panel discussion evaluation and critique by Montgomery Anderson, Cody, Anderson, Wasney, Commissioner Tim Kelly, San Francisco Landmarks Preservation Advisory Board, and Sylvia Kwan, Kwan Henmi Architecture/Planning)

Presentation of and discussion of a peer review of proposed designs for the West Portal Branch Library.

Public comment on AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

An anonymous member of the public expressed concern with the proposed accessible side entry and the front garden areas, and suggested that careful work would be necessary with the interiors to preserve the original woodwork and furnishings.
Mr. Peter Warfield expressed happiness with the proposed preservation based renovation; questioned how original furnishings might be adapted; and decried that there was no gain over the original space for books.
Mr. John Burket, a lifelong West Portal Branch user, applauded the sensitive renovation making the branch accessible to his elderly parents; and inquired about the designs for the proposed garden at the Ulloa Street corner, calling attention to its windy nature.

Commission discussion of AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

The Commission's discussion found the proposed renovation design much to their liking. Commissioners' questions elicited additional details concerning how the new accessibility and staff work areas would unify and better organize functionality and services, while preserving existing charm and attractive ambience of the historic WPA (Works Progress Administration) building. President Higueras concluded by expressing the Commission's thanks and appreciation to the Peer Review panelists Mr. Montgomery Anderson, Cody, Anderson, Wasney, Commissioner Tim Kelly, San Francisco Landmarks Preservation Advisory Board, and Ms. Sylvia Kwan, Kwan Henmi Architecture/Planning for their services to the Library.

AGENDA ITEM # 6 ADJOURNMENT

Commissioner Steiman left the meeting at 7:20pm

The meeting ended with the loss of its quorum at 7:20pm.

Michael Housh, Commission Secretary 4/21/04

Please note: These are draft Minutes subject to change by the Library Commission. Copies of Commission Minutes and handouts are available in the Office of the Commission Secretary, 100 Larkin Street, San Francisco, CA 94102

ATTACHMENTS:

Public Wireless Internet Network Demonstration Memo 4/12/04
Proposed West Portal Branch Library renovation floor plans
West Portal Branch Library FAQs
Branch Library Improvement Program (BLIP) Manager's Report notes
Branch Library Improvement Program Schedule 2/19/04
Branch Library Improvement Program Budget 4/15/04

Explanatory documents: Copies of listed explanatory documents are available as follows: (1) from the Commission Secretary/Custodian of Records, Main Library, 6th Floor, (2) in the rear of the Koret Auditorium immediately before and during the meeting, and (3)to the extent possible, on the Library's website at http://sfpl.org/.

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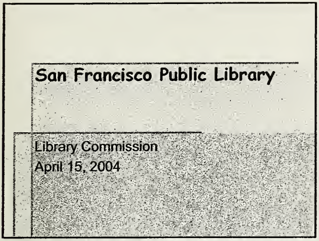
Minutes of the Library Commission Meeting April 15, 2004

Appendix A

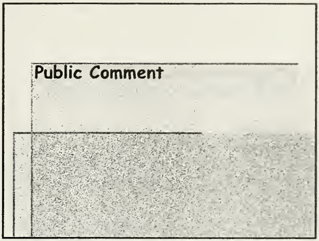
The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16.

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.
The number of members of the public who spoke anonymously at this meeting. 1

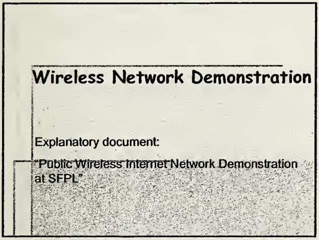


San Francisco Public Library

Library Commission
April 15, 2004



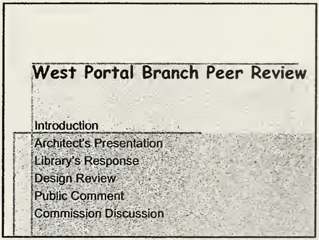
Public Comment



Wireless Network Demonstration

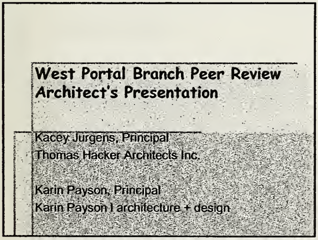
Explanatory document:

"Public Wireless Internet Network Demonstration at SFPL"



West Portal Branch Peer Review

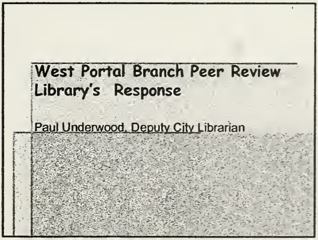
Introduction
Architect's Presentation
Library's Response
Design Review
Public Comment
Commission Discussion



West Portal Branch Peer Review Architect's Presentation

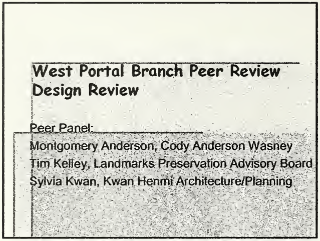
Kacey Jurgens, Principal
Thomas Hacker Architects Inc.

Karin Payson, Principal
Karin Payson l architecture + design



West Portal Branch Peer Review Library's Response

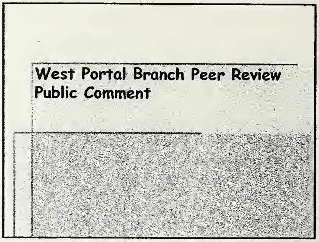
Paul Underwood, Deputy City Librarian



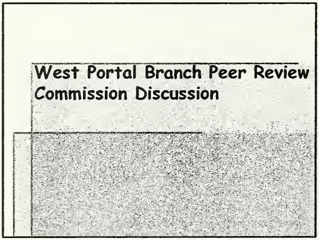
West Portal Branch Peer Review
Design Review

Peer Panel:

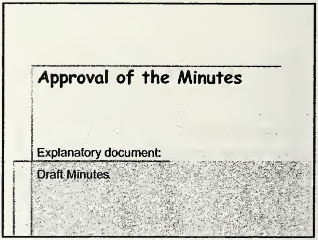
Montgomery Anderson, Cody Anderson Wasney
Tim Kelley, Landmarks Preservation Advisory Board
Sylvia Kwan, Kwan Henmi Architecture/Planning



West Portal Branch Peer Review
Public Comment



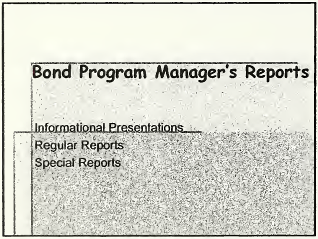
West Portal Branch Peer Review
Commission Discussion



Approval of the Minutes

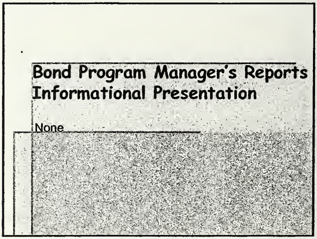
Explanatory document:

Draft Minutes



Bond Program Manager's Reports

Informational Presentations
Regular Reports
Special Reports



Bond Program Manager's Reports
Informational Presentation

None

Bond Program Manager's Reports
Regular Reports

Budget Report
Schedule Report
Active Projects Reports
Community Outreach

Budget Report

Explanatory document:
Current Budget Report

Budget Report

- Recap:
  10-10-01 Baseline Budget & Reserve established
  11-15-01 Glen Park increased $88,000 for site acquisition
  01-17-02 Increased Reserve for Prop 14 (reduced all projects 5%)
  05-16-02 Art Enrichment Program Funded ($302,000 from 6 projects)
  06-20-02 Mission Bay increased $653,000 for site acquisition
  12-20-02 Ingleside increased $455,000 for site acquisition
  02-20-03 Friends & Foundation Budget for FF&E updated
  04-17-03 VVA increased $716,000 for site acquisition
  06-26-03 DRE increased $115,281
  10-16-03 Relocation & Moving Budgets for SSF & EXC allocated
  TODAY no changess

Schedule Report

Explanatory document:
Branch Library Program Summary Schedules

Schedule Report

- Recap:
  10-10-01 Baseline Schedule established
  12-20-01 Revised Glen Park to match Developer's schedule
  01-17-02 Issued detailed schedules for Phases 1-2
  02-21-02 Revised to reflect Prop 14 strategy
  Revised Mission Bay to match Developer's schedule
  03-21-02 Issued detailed schedules for all Phases
  04-18-02 Revised to reflect Prop 14 strategy
  06-20-02 Adjusted projects for geographic distribution
  04-17-03 Revised to reflect revised Prop 14 strategy
  Revised Mission Bay to match Developer's schedule
  Revised Glen Park to match Developer's schedule
  02/19/04 Various changes per memo dated 2/17/04
  TODAY No changes

Active Projects Reports

New Construction
Renovations

Active Projects Reports
New Construction

- Mission Bay
  - Construction phase
- Glen Park
  - Construction start imminent
  - Public Artist selected
  - Community Meeting
  - Schematic Design Phase

Active Projects Reports
New Construction

- Ingleside
  - Demolition complete
  - Planning Dept. Applications / Approvals
  - Schematic Design Phase – on hold
  - Public Art
- Portola
  - Planning Dept. Applications / Approvals
  - Schematic Design Phase – on hold
  - Public Art
  - Community Meeting

Active Projects Reports
New Construction

- Visitacion Valley
  - Supermarket lease extended
  - Conceptual Design phase – on hold
- Ortega
  - Conceptual Design phase – on hold
  - Coordination with RPD & DCP

Active Projects Reports
Renovations

- Excelsior
  - Construction Start
  - Interim Services
- West Portal
  - Design Development Phase
  - Permit application submitted
  - Power Pole to be moved
  - Community Meeting
  - Civic Design Review
- Sunset
  - Schematic Design Phase
  - Landmark Status

Active Projects Reports
Renovations

- Noe Valley
  - Permit application submitted
  - Schematic Design Phase
- Western Addition
  - Planning & Programming Phase
  - Survey
- Marina
  - Conceptual Design Phase
  - Coordination with RPD & DCP

Active Projects Reports
Renovations

- Richmond
  - Prop 14 Determination & Re-submittal
  - Construction Documents Phase – on hold
  - Landmarks Board Nomination
- Parkside
  - Expansion Approved – on hold
- North Beach
  - Planning & Programming Phase – on hold
  - Triangle Property
- Support Services Facility
  - Construction Phase

Community Outreach Update

- Library meetings:
  - 3/30 Portola Community Meeting
  - 4/3 West Portal Community Meeting
  - 4/19 Marina Community Meeting
  - 4/26 Sunset Community Meeting
  - 5/11 Western Addition Community Meeting
  - 5/12 Noe Valley Community Meeting
- Library attended:
  - 3/22 Moscone Recreation Center Community Meeting #4
  - 4/8 Sunset Neighborhood Coalition
  - 4/13 Glen Park Neighborhood Association
  - 4/14 District 2 Town Hall
  - 4/24 District 10 Town Hall

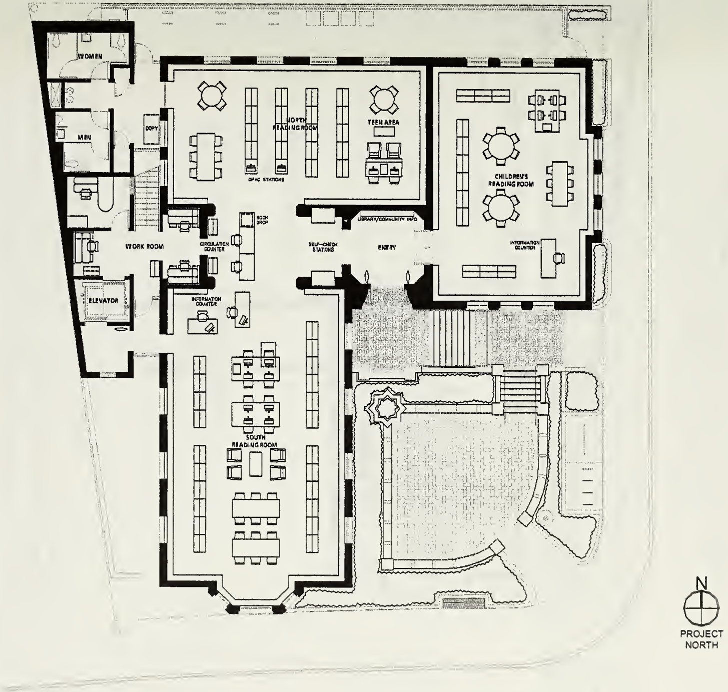
Community Outreach Update

- Related City Boards/Commissions:
  - 4/15 Planning Commission (Glen Park Community Plan)
  - 4/21 Landmarks Preservation Advisory Board (Richmond)
  - 5/6 Planning Commission (Ingleside)
- Other Outreach:
  - www.sfpl.org/news/blip/improvementprogram.htm
  - Newsletter - Issued quarterly (Winter 2004)
  - Bulletin Board – Sixth Floor

Bond Program Manager's Reports Special Report

None

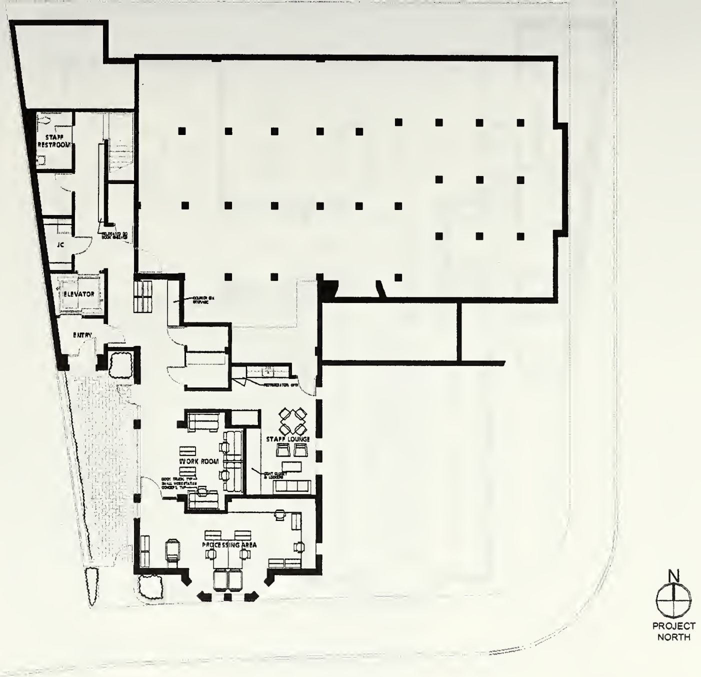
Adjournment


WOMEN
MEN
COPY
NORTH READING ROOM
TEEN AREA
OPAC STATIONS
CHILDREN'S READING ROOM
BOOK DROP
LIBRARY/COMMUNITY INFO
WORK ROOM
CIRCULATION COUNTER
SELF-CHECK STATIONS
ENTRY
INFORMATION COUNTER
ELEVATOR
INFORMATION COUNTER
SOUTH READING ROOM
N
PROJECT NORTH

SAN FRANCISCO PUBLIC LIBRARY
WEST PORTAL BRANCH

MAIN FLOOR PLAN

THOMAS HACKER
ARCHITECTS INC


STAFF RESTROOM
JC
RELOCATED BOOK SHELVES
ELEVATOR
ENTRY
COURIER BIN STORAGE
REFRIGERATOR OPT
STAFF LOUNGE
WORK ROOM
BOOK TRUCK, TYP
SMALL WORKSTATION CONCEPT, TYP
COAT CLOSET & LOCKERS
PROCESSING AREA
N
PROJECT NORTH

SAN FRANCISCO PUBLIC LIBRARY
WEST PORTAL BRANCH

GROUND FLOOR PLAN

THOMAS HACKER
ARCHITECTS INC.

4-15-04

BRANCH LIBRARY
IMPROVEMENT PROGRAM

City & County of San Francisco
Branch Library Improvement Program

West Portal Branch Library Renovation
Frequently Asked Questions

Q. What are the plans for the branch?
A. The Library plans to make the building accessible, and reduce the seismic risk while preserving the historic character of the existing building. A small expansion at the rear of the building to recoup space needed for disabled access and seismic work is included. Also, an elevator will be added and the staff areas enhanced for greater functionality.

Q. What will be some of the benefits of the renovated branch?

- Seismic strengthening
- New restrooms
- A safe accessible elevator with an entrance from Ulloa Street
- New after hours book drop on Ulloa Street at ground level
- Improved landscaping
- Better staff work areas both upstairs and downstairs
- A designated teen area
- Better lighting
- New or restored furniture
- Clearer signage
- New computers
- Flexible Children's Room for easier programs
- Enhanced historic features such as lights, ceiling stencils, and woodwork
- New self-check machines
- A variety of seating choices
- Improved heating and ventilation

Q. When will the branch be closed and for how long?
A. The branch is scheduled to close for construction in late 2004 and reopen in fall 2006 or earlier. During the renovation, library services will be provided by increasing hours at nearby branches, holding programs at neighborhood schools and community centers, and by bookmobile service.

Q. The West Portal Branch was closed in 2002. Why close it again?
A. The only improvement was a much needed electrical upgrade. This time there will be a complete renovation.

Q. Who are the architects?
A. Thomas Hacker Architects Inc., of Portland, Oregon and Karin Payson Architects + Design of San Francisco.

Q. Will the amount of books increase?
A. The materials (books, CDs, DVDs, videos, books on tape, etc.) collection will remain the same. However, materials may be easier to find on new shelves in an improved layout. The addition of space will go for increased accessibility and new restrooms.

Q. What happens to the existing furniture?
A. Some historic pieces may be restored, but most of the furniture will be replaced. The Library has developed interior design guidelines to help the architects and staff choose appropriate furniture based on functionality, ergonomics, durability, maintenance, flexibility, sustainability, as well as the architectural period.

Q. Is the community involved in the design process?
A. Yes. A survey was conducted in September/October 2003, where 598 people gave their opinion about materials, facilities, and services at the branch. Two community meetings were held at the branch to discuss conceptual designs (November 2003 & April 2004). Before the plans are finalized, the Library Commission will hold a public Peer Review where an independent architect, planner or historic preservationist, and an interior designer review the design. Then the architects will go back to the community to discuss the final plans.

Q. Where does the money come from to renovate the branch?
A. In November 2000, the voters overwhelmingly passed a bond measure for $106 million to upgrade San Francisco's branch library system. The bond's priorities are to reduce seismic risk, meet modern technological needs and current code requirements, comply with the Americans with Disabilities Act (ADA), and provide spaces that are responsive to current services, yet flexible enough to meet future needs. In addition, while the bond pays for a significant portion of the costs, it does not pay for furniture, fixtures, and equipment. The Friends of the San Francisco Public Library will raise $16 million from private donations to pay for these costs. Call (415) 437-4859 to help with the Friends campaign.

Q. How much does construction cost for the West Portal Branch?
A. The project has a construction budget of $2.7 million to renovate and expand the existing building.

Q. How do I find out more information about my branch renovation?
A. Contact the Branch Library Improvement Program at (415) 557-4354, check www.sfpl.org, or email BLIP@sfpl.org.

4/12/2004

CURRENT BU REPORT-2000 Branch Library Improvement Bond Program
April 15, 2004

	BUDGET		REVENUE			FUND STATUS		EXPENDITURES/ENCUMBRANCES	
			FUND STRATEGY						
Branch Name	Baseline Budget (10/01)	Approved Budget (2/04)	City Prop A Bonds	Other Sources	Total All Sources	Appropriated	Total Available	Actual 31-Mar-04 B	New This Month
Site Acquisitions & New Construction									
Glen Park	4,570,000	4,681,000	4,681,000		4,681,000	4,728,250	4,728,250	288,628	114,844
Ingleside	4,570,000	4,843,000	1,943,000	2,900,000 (1)	4,843,000	2,890,000	2,890,000	2,536,453	532
Mission Bay	3,350,000	3,957,000	3,957,000		3,957,000	3,957,000	3,957,000	3,454,215	3,190,804
Portola	4,570,000	4,388,000	1,988,000	2,400,000 (1)	4,388,000	2,435,000	2,435,000	1,876,524	(47)
Support Services	9,080,000	8,876,000	8,876,000		8,876,000	8,626,000	8,626,000	8,737,289	104,100
Visitacion Valley	5,320,000	5,826,500	5,826,500		5,826,500	2,870,000	2,870,000	2,233,582	21,823
SUBTOTAL	*31,460,000*	*32,571,500*	*27,271,500*	*5,300,000*	*32,571,500*	*25,506,250*	*25,506,250*	*19,126,691*	*3,432,056*
Renovations									
Anza	4,740,000	4,503,000	4,503,000		4,503,000		0	0	0
Bayview	3,820,000	3,629,000	3,629,000		3,629,000		0	18,690	0
Bernal Heights	5,350,000	5,082,500	5,082,500		5,082,500		0	0	0
Eureka Valley	4,580,000	4,351,000	4,351,000		4,351,000		0	18,202	0
Excelsior	3,820,000	3,649,000	3,649,000		3,649,000	3,629,000	3,629,000	2,620,920	1,846,978
Golden Gate Valley	5,340,000	5,073,000	5,073,000		5,073,000	50,000	50,000	0	0
Marina	4,110,000	3,904,500	3,904,500		3,904,500	976,125	976,125	525,832	0
Merced	4,200,000	3,990,000	3,990,000		3,990,000		0	0	0
Noe Valley	4,410,000	4,189,500	4,189,500		4,189,500	1,047,125	1,047,125	734,051	962
North Beach	3,460,000	3,287,000	3,287,000		3,287,000	821,750	821,750	118	0
Ortega	3,560,000	3,382,000	3,382,000		3,382,000	350,000	350,000	139,856	1,403
Park	1,310,000	1,244,500	1,244,500		1,244,500		0	0	0
Parkside	2,880,000	3,236,000	3,236,000		3,236,000	2,736,000	2,736,000	89,204	0
Potrero	4,230,000	4,018,500	4,018,500		4,018,500		0	0	0
Presidio	1,530,000	1,453,500	1,453,500		1,453,500	353,400	353,400	116,648	0
Richmond	7,630,000	7,141,500	41,500	7,100,000 (2),(1)	7,141,500	2,441,500	2,441,500	1,004,904	4,860
Sunset	1,490,000	1,415,500	1,415,500		1,415,500	1,415,500	1,415,500	247,414	237,100
West Portal	4,110,000	3,904,500	3,904,500		3,904,500	976,125	976,125	672,398	608,609
Western Addition	3,430,000	3,258,500	3,258,500		3,258,500		0	24,805	103
SUBTOTAL	*74,000,000*	*70,713,000*	*63,613,000*	*7,100,000*	*70,713,000*	*14,796,525*	*14,796,525*	*6,213,042*	*2,700,015*
Program-Wide Services & Costs									
Library Program Costs	800,000	800,000	800,000		800,000	600,000	600,000	485,436	20
Program Consultants	750,000	750,000	750,000		750,000	562,500	562,500	114,937	2,692
City Program Management	3,600,000	3,600,000	3,600,000		3,600,000	1,013,822	1,013,822	968,998	36,762
Real Estate Dept	120,000	235,281	235,281		235,281	235,281	235,281	235,281	0
Art Enrichment Program	0	302,000	302,000		302,000	302,000	302,000	81,064	0
Program Interim Services		438,400	348,400	90,000 (4)	438,400	300,000	300,000	253,542	0
Relocation & Moving Reserve	4,360,000	410,000	0	410,000 (4)	410,000			0	0
Furniture & Equipment Reserve	15,000,000	16,000,000	0	16,000,000 (3)	16,000,000		0	0	0
Bond Financing Costs	1,500,000	1,500,000	1,500,000		1,500,000	338,622	338,622	290,051	0
Program Reserve	1,675,000	7,444,819	7,444,819		7,444,819		0	0	0
SUBTOTAL	*27,805,000*	*31,480,500*	*14,980,500*	*16,500,000*	*31,480,500*	*3,352,225*	*3,352,225*	*2,429,309*	*39,474*
TOTALS	**133,265,000**	**134,765,000**	**105,865,000**	**28,900,000**	**134,765,000**	**43,655,000**	**43,655,000**	**27,769,042**	**6,171,545**

(1) Prop. 14 State Grants
(2) Earthquake Safety Program funds remaining for Branch Libraries ($2,400,000)
(3) Private donations from Friends & Foundation
(4) Library Preservation Fund, appropriated by Board of Supervisors 03/04 AAO

PUBLIC WIRELESS INTERNET NETWORK DEMONSTRATION
AT THE
SAN FRANCISCO PUBLIC LIBRARY

An open-ended trial of a public wireless Internet network will begin soon on the 4th Floor of the Main Library. Users with their own laptops can access this free service to browse the Internet, send email and search the Library catalog and licensed databases. Laptop owners will free up time on the heavily-booked Library computers, allowing more access for other users.

Key features of the demonstration:

- 3 access points on 4th Floor
- Range of signal is 150 feet from access points. Obstructions such as book shelves, windows, & desks lessen the signal
- Unlimited simultaneous users
- Any user with a WiFi-compliant 802.11b wireless Ethernet device installed in a laptop or a laptop with built-in WiFi capability can use the network
- Access will be available all hours that Main Library is open
- Wireless LAN service has separate DSL line and is not connected to the Library's network
- Statistics on usage will be gathered – number of users per day & length of sessions
- Signage at all Main Library entrances and on the 4th floor will inform the public of the network.
- As with users who currently bring laptops to the Library to connect to our network with cables, we will not provide technical support.
- Basic instructions on how to connect to the network wireless LAN service will be posted in seating areas within the range of the signal.
- The Library's website will include information about this service.
- A Limitations and Disclaimer Statement will be posted with proposed text:

  > The Library's wireless network is not secure. Information sent from or to your laptop can be captured by anyone else with a wireless device and the appropriate software, within three hundred feet. Library staff is not able to provide technical assistance and no guarantee can be provided that you will be able to make a wireless connection. The Library assumes no responsibility for the safety of equipment or for laptop configurations, security, or data files resulting from connection to the Library's network.

- Local libraries currently using WiFi access:

  Foster City
  Half Moon Bay
  Menlo Park
  Palo Alto
  Redwood City
  Santa Clara University
  Sonoma County
  Sonoma State
  University of San Francisco

4/12/04

E-file sets record

Taxpayers have been filing electronic tax returns in record numbers, the Internal Revenue Service reported one week before the April 15 filing deadline.

Business

THE EXAMINER.
Monday, April 12, 2004

Wired into wireless

Bay Area has the most Wi-FI hot spots in the nation, study reports

BY MATTHEW FORDAHL
Associated Press

SAN JOSE — The Bay Area is the nation's top market for wireless Internet hot spots, according to a new study sponsored by Intel Corp.

The region was followed by Orange County, Washington, D.C., and Austin, Texas. Last year's "most unwired" area, Portland, Ore., was bumped to No. 5 on the list compiled for the semiconductor giant by "Best Places" author Bert Sperling.

Intel, which has invested hundreds of millions of dollars in marketing its Centrino mobile chip sets, sees the growing popularity of Wi-Fi wireless Internet service as a big driver of microprocessors, particularly those used in laptop and handheld computers.

Wi-Fi is no longer limited to airports, coffee houses and home networks. Hot spots are springing up in tourist spots, truck stops, RV parks and shopping malls. Intel's survey did not say what percentage of the hot spots were paid versus free.

Sperling also found:

- Indiana University in Bloomington, Ind., is the nation's most unwired campus. It's followed by Purdue University, the University of Texas at Austin, Case Western Reserve University and Dartmouth College.
- Dallas-Forth Worth is the best U.S. airport for Wi-Fi access, followed by New York LaGuardia, Atlanta Hartsfield, Chicago O'Hare and Baltimore-Washington.

The studies' findings were based on calculations involving the number of wireless access points and the number of people in the metropolitan region, college or airport, among other factors.

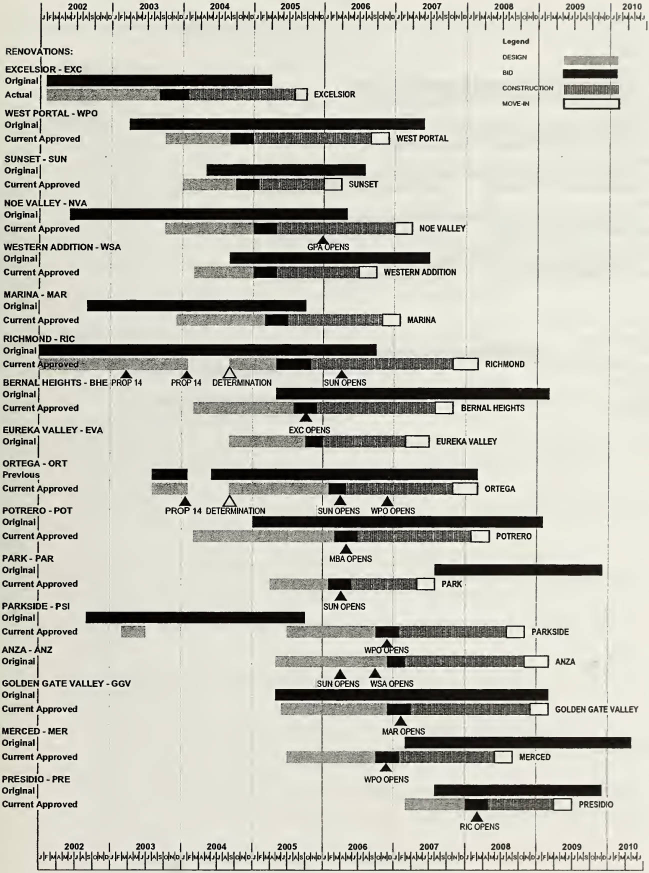
PAUL SAKUMA/AP

Mark Brooks works at his laptop PC using the unlimited 24-hour free Wi-Fi service at Happy Donuts in Palo Alto.

Branch Library Program Summary Schedules

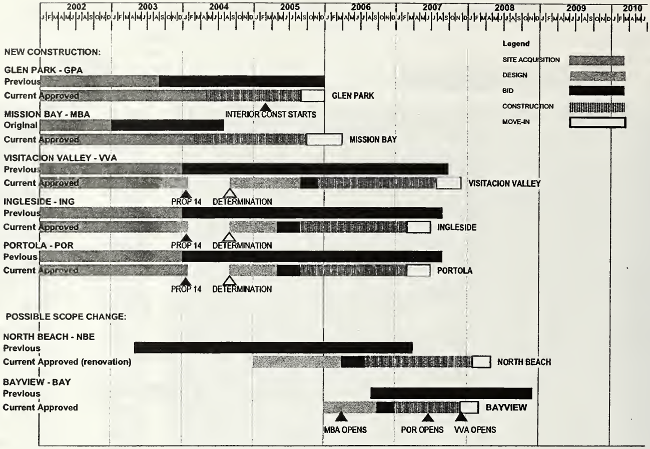
Monthly Bond Program Manager's Report

Approved February 19, 2004



Branch Library Program Summary Schedules

Monthly Bond Program Manager's Report
Approved February 19, 2004



San Francisco Public Library Commission
100 Larkin Street, San Francisco, CA 94102-4733
Phone 415.557.4233, Fax 415.557.4240

DOCUMENTS DEPT
SEP - 9 2004
SAN FRANCISCO
PUBLIC LIBRARY

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76
2
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approved

Gavin Newsom
Mayor

Charles A. Higueras, A.I.A.
President

Carol Steiman
Vice President

Helen Marte Bautista
Lonnie K. Chin
Steven A. Coulter
Fran A. Streets
Deborah Strobin
Commissioners

Susan Hildreth
City Librarian

Michael Housh
Commission Secretary

SAN FRANCISCO PUBLIC LIBRARY COMMISSION

Minutes of the regular meeting of Thursday, April 15, 2004.
(As approved May 20, 2004)

The San Francisco Public Library Commission held a regular meeting on Thursday, April 15, 2004, in the Koret Auditorium, Main Library.

The meeting was called to order at 4:08 pm.

The following members were present: Bautista, Coulter, Higueras, and Steiman, Commissioners Streets and Strobin were reported excused.

AGENDA ITEM #1 PUBLIC COMMENT

Public comment on AGENDA ITEM #1 PUBLIC COMMENT

An anonymous member of the public commented on discussion of a library citizen advisory committee at the Board of Supervisors Rules Committee.

Mr. Peter Warfield noted a lack of explanatory documents and commented on the Rules Committee meeting.

Mr. David Pilpel, member–elect, Sunshine Ordinance Task Force, offered suggestions for improvements to the meeting minutes modeled on those used by the Ethics Commission.

Ms. Rhoda Meer urged retention and reuse of the original chairs in the renovation of the West Portal Branch Library.

AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

(Presented by Library Chief of Automation Vivian Pisano and Chief of the Main Library Kathy Lawhun with additional information by Mr. Tim Pozar, BARWN (Bay Area Wireless Network)

Presentation and discussion of a wireless internet network demonstration for the Library.

Public comment on AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

An anonymous member of the public found no need for such a demonstration, questioned how it would be assessed, and asked what trade-off of other library services would be necessary to provide it.

Mr. Peter Warfield decried that lack of explanatory documents available prior to the meeting and criticized what he found to be a lack of detail about the proposed wireless demonstration.

Ms. Traci Hughes expressed concern with the possible health effects of use of the technology; noted potential lawsuits; and urged the Commissioners to consider the Board of Supervisors' Precautionary Principle concerning use of new technologies.

Commission discussion of AGENDA ITEM #2 WIRELESS NETWORK DEMONSTRATION

In response to a query by President Higueras, library staff reported that the proposed demonstration project was in response to many library users' requests for wireless access availability at the Main Library and in branch libraries. The Deputy City Librarian confirmed that only minimal cost would be incurred by making the proposed wireless access available. Mr. Underwood additionally noted potential for a great many users that in turn could result in freeing more of the Library's wired computers for other users. It was a consensus of the Commission that there was significant value in providing the proposed wireless access. Vice President Steiman and Commissioner Coulter suggested that staff report back to the Commission at a future date concerning the results of the demonstration and levels of use of the new wireless access.

Due to the delayed arrival of a member of the Peer Review Panel, President Higueras took up Agenda Item #4 Approval of the Minutes and Agenda Item #5 the BLIP Manager's Report next.

AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

Public comment on AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

An anonymous member of the public found that the brevity of detail in these Minutes inhibited understanding of the real meaning of public comments offered, citing as example reported comments by Mr. Warfield.
Peter Warfield found the Minutes reporting too brief to reflect accurately comment offered, citing as example comments he had made about online catalog problems.

Commission discussion of AGENDA ITEM #4 APPROVAL OF THE MINUTES OF FEB. 19, 2004

Commissioner Coulter suggested that in future complete sentences be used to describe reported public comments.

MOTION: Commissioner Bautista, 2nd Commissioner Coulter for approval of the Minutes of the regular Commission meeting of February 19, 2004.

Adopted by the following vote:
AYE 4-0 (Bautista, Coulter, Higueras, and Steiman)

AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

(Presented by Branch Library Improvement Program Manager Marilyn Thompson)
(This is a discussion item to allow the Branch Library Bond Program Manager to report on recent bond program related activities and make announcements.)
This report will consist of *an informational presentation*: none *regular reports*: program budget and schedule; active projects; and community outreach; and *special reports;* none.

Public comment on AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

An anonymous member of the public noted that copies of the BLIP Budget and Schedule Reports that this person received were poor black and white reproductions of the larger colored copies made available to the Commissioners and were unreadable.

Commission discussion of AGENDA ITEM #5 BOND PROGRAM MANAGER'S REPORT

President Higueras recommended use of charts that could be easily read in black and white reproduction. He then noted that Library staff should continue to go forward with plans for renovation of the North Beach Branch Library should a community consensus did not soon develop in the wake of the neighborhood controversy concerning expansion of the North Beach Playground. There followed a brief discussion use of the original wooden chairs and preservation of period detail in the planned renovation of the West Portal Branch Library.

President Higueras called a brief recess at 5:51pm.
The Commission reconvened at 5:59pm.

AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

(The Peer Review Panel presentation consisted of an introduction by BLIP Manager Marilyn Thompson., the architects' presentation by Kacey Jurgens, Principle, Thomas Hacker Architects Inc, and Karin Payson, Principle, Karin Payson architecture + design, a Library response to the proposed design by Deputy City Librarian Paul Underwood, and concluded with the expert Peer Panel discussion evaluation and critique by Montgomery Anderson, Cody, Anderson, Wasney, Commissioner Tim Kelly, San Francisco Landmarks Preservation Advisory Board, and Sylvia Kwan, Kwan Henmi Architecture/Planning)

Presentation of and discussion of a peer review of proposed designs for the West Portal Branch Library.

Public comment on AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

An anonymous member of the public expressed concern with the proposed accessible side entry and the front garden areas, and suggested that careful work would be necessary with the interiors to preserve the original woodwork and furnishings.
Mr. Peter Warfield expressed happiness with the proposed preservation based renovation; questioned how original furnishings might be adapted; and decried that there was no gain over the original space for books.
Mr. John Burket, a lifelong West Portal Branch user, applauded the sensitive renovation making the branch accessible to his elderly parents; and inquired about the designs for the proposed garden at the Ulloa Street corner, calling attention to its windy nature.

Commission discussion of AGENDA ITEM #3 WEST PORTAL BRANCH PEER REVIEW

The Commission's discussion found the proposed renovation design much to their liking. Commissioners' questions elicited additional details concerning how the new accessibility and staff work areas would unify and better organize functionality and services, while preserving existing charm and attractive ambience of the historic WPA (Works Progress Administration) building. President Higueras concluded by expressing the Commission's thanks and appreciation to the Peer Review panelists Mr. Montgomery Anderson, Cody, Anderson, Wasney, Commissioner Tim Kelly, San Francisco Landmarks Preservation Advisory Board, and Ms. Sylvia Kwan, Kwan Henmi Architecture/Planning for their services to the Library.

AGENDA ITEM # 6 ADJOURNMENT

Commissioner Steiman left the meeting at 7:20pm

The meeting ended with the loss of its quorum at 7:20pm.

Michael Housh, Commission Secretary 5/21/04

ATTACHMENTS:
Public Wireless Internet Network Demonstration Memo 4/12/04
Proposed West Portal Branch Library renovation floor plans
West Portal Branch Library FAQs
Branch Library Improvement Program (BLIP) Manager's Report notes
Branch Library Improvement Program Schedule 2/19/04
Branch Library Improvement Program Budget 4/15/04

Explanatory documents: Copies of listed explanatory documents are available as follows: (1) from the Commission Secretary/Custodian of Records, Main Library, 6th Floor, (2) in the rear of the Koret Auditorium immediately before and during the meeting, and (3)to the extent possible, on the Library's website at http://sfpl.org/.

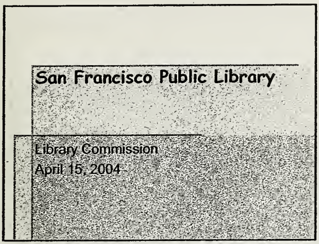
Additional materials not listed as explanatory documents on this agenda, if any, that are distributed to the Library Commissioners prior to or during the meeting in connection with any agenda item will be available to the public for inspection and copying in accordance with Government Code Section 54954.1 and Sunshine Ordinance §§ 67.9, 67.28(b)& 67.28(d).

Minutes of the Library Commission Meeting April 15, 2004

Appendix A

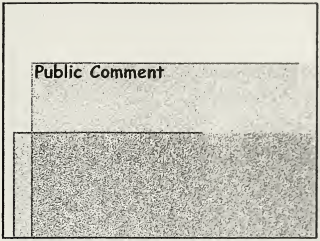
The Public Comment Summary Statements included in these Minutes are authorized by San Francisco Administrative Code Section 67.16.

These summary statements are provided by the speaker. Their contents are neither generated by, nor subject to approval or verification of accuracy by, the San Francisco Public Library Commission.
The number of members of the public who spoke anonymously at this meeting. 1

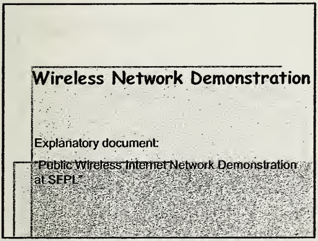


San Francisco Public Library

Library Commission
April 15, 2004



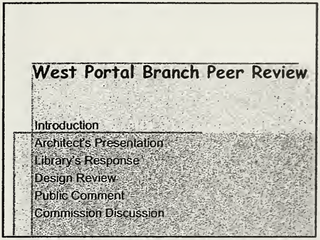
Public Comment



Wireless Network Demonstration

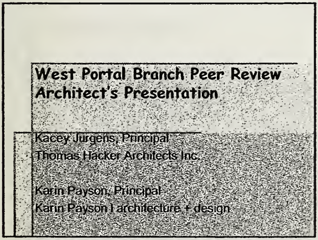
Explanatory document:

"Public Wireless Internet Network Demonstration at SFPL"



West Portal Branch Peer Review

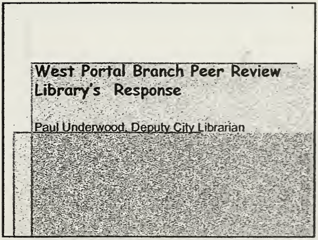
- Introduction
- Architect's Presentation
- Library's Response
- Design Review
- Public Comment
- Commission Discussion



West Portal Branch Peer Review
Architect's Presentation

Kacey Jurgens, Principal
Thomas Hacker Architects Inc.

Karin Payson, Principal
Karin Payson I architecture + design



West Portal Branch Peer Review
Library's Response

Paul Underwood, Deputy City Librarian

West Portal Branch Peer Review
Design Review

Peer Panel:

Montgomery Anderson, Cody Anderson Wasney

Tim Kelley, Landmarks Preservation Advisory Board

Sylvia Kwan, Kwan Henmi Architecture/Planning

West Portal Branch Peer Review
Public Comment

West Portal Branch Peer Review
Commission Discussion

Approval of the Minutes

Explanatory document:

Draft Minutes

Bond Program Manager's Reports

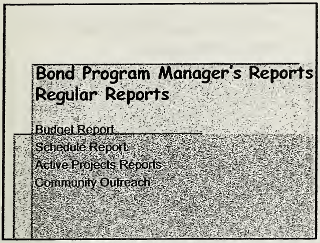
Informational Presentations

Regular Reports

Special Reports

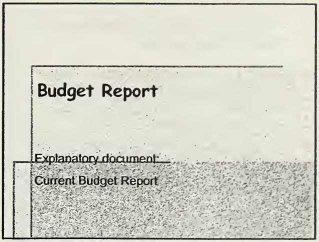
Bond Program Manager's Reports
Informational Presentation

None



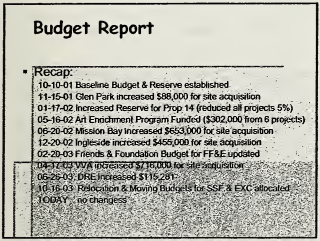
Bond Program Manager's Reports Regular Reports

Budget Report
Schedule Report
Active Projects Reports
Community Outreach



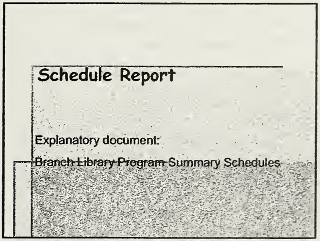
Budget Report

Explanatory document:
Current Budget Report



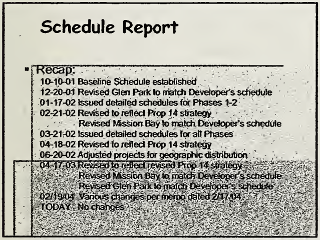
Budget Report

- Recap:
  10-10-01 Baseline Budget & Reserve established
  11-15-01 Glen Park increased $88,000 for site acquisition
  01-17-02 Increased Reserve for Prop 14 (reduced all projects 5%)
  05-16-02 Art Enrichment Program Funded ($302,000 from 6 projects)
  06-20-02 Mission Bay increased $653,000 for site acquisition
  12-20-02 Ingleside increased $455,000 for site acquisition
  02-20-03 Friends & Foundation Budget for FF&E updated
  04-17-03 VVA increased $716,000 for site acquisition
  06-26-03 DRE increased $115,281
  10-16-03 Relocation & Moving Budgets for SSF & EXC allocated
  TODAY no changess



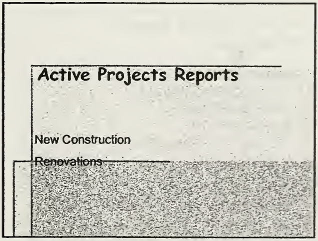
Schedule Report

Explanatory document:
Branch Library Program Summary Schedules



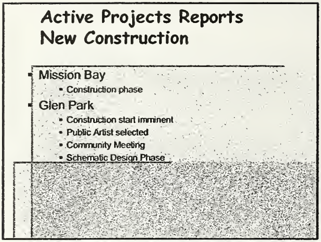
Schedule Report

- Recap:
  10-10-01 Baseline Schedule established
  12-20-01 Revised Glen Park to match Developer's schedule
  01-17-02 Issued detailed schedules for Phases 1-2
  02-21-02 Revised to reflect Prop 14 strategy
  Revised Mission Bay to match Developer's schedule
  03-21-02 Issued detailed schedules for all Phases
  04-18-02 Revised to reflect Prop 14 strategy
  06-20-02 Adjusted projects for geographic distribution
  04-17-03 Revised to reflect revised Prop 14 strategy
  Revised Mission Bay to match Developer's schedule
  Revised Glen Park to match Developer's schedule
  02/19/04 Various changes per memo dated 2/17/04
  TODAY No changes



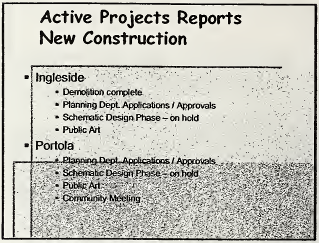
Active Projects Reports

New Construction
Renovations



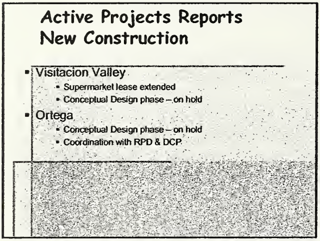
Active Projects Reports New Construction

- Mission Bay
  - Construction phase
- Glen Park
  - Construction start imminent
  - Public Artist selected
  - Community Meeting
  - Schematic Design Phase



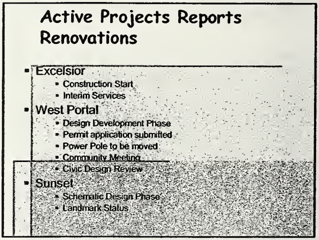
Active Projects Reports New Construction

- Ingleside
  - Demolition complete
  - Planning Dept. Applications / Approvals
  - Schematic Design Phase – on hold
  - Public Art
- Portola
  - Planning Dept. Applications / Approvals
  - Schematic Design Phase – on hold
  - Public Art
  - Community Meeting



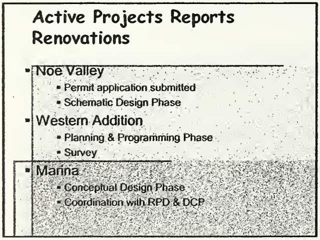
Active Projects Reports New Construction

- Visitacion Valley
  - Supermarket lease extended
  - Conceptual Design phase – on hold
- Ortega
  - Conceptual Design phase – on hold
  - Coordination with RPD & DCP



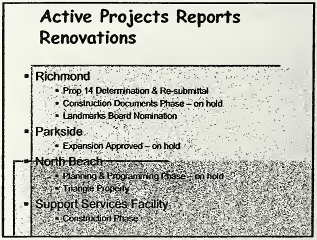
Active Projects Reports Renovations

- Excelsior
  - Construction Start
  - Interim Services
- West Portal
  - Design Development Phase
  - Permit application submitted
  - Power Pole to be moved
  - Community Meeting
  - Civic Design Review
- Sunset
  - Schematic Design Phase
  - Landmark Status



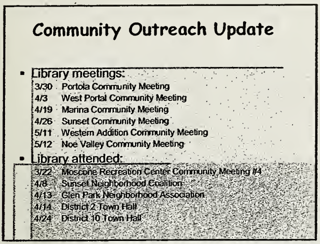
Active Projects Reports Renovations

- Noe Valley
  - Permit application submitted
  - Schematic Design Phase
- Western Addition
  - Planning & Programming Phase
  - Survey
- Marina
  - Conceptual Design Phase
  - Coordination with RPD & DCP



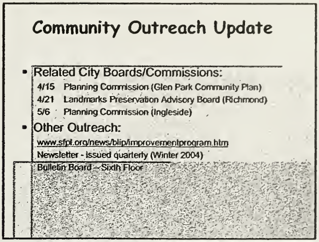
Active Projects Reports Renovations

- Richmond
  - Prop 14 Determination & Re-submittal
  - Construction Documents Phase – on hold
  - Landmarks Board Nomination
- Parkside
  - Expansion Approved – on hold
- North Beach
  - Planning & Programming Phase – on hold
  - Triangle Property
- Support Services Facility
  - Construction Phase



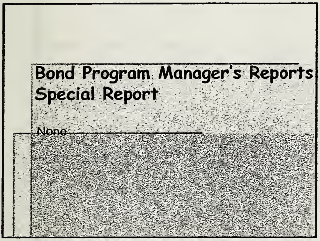
Community Outreach Update

- Library meetings:
  - 3/30 Portola Community Meeting
  - 4/3 West Portal Community Meeting
  - 4/19 Marina Community Meeting
  - 4/26 Sunset Community Meeting
  - 5/11 Western Addition Community Meeting
  - 5/12 Noe Valley Community Meeting
- Library attended:
  - 3/22 Moscone Recreation Center Community Meeting #4
  - 4/8 Sunset Neighborhood Coalition
  - 4/13 Glen Park Neighborhood Association
  - 4/14 District 2 Town Hall
  - 4/24 District 10 Town Hall



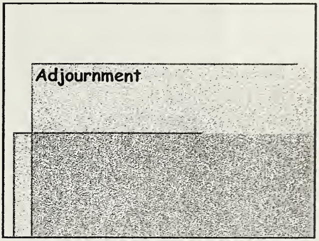
Community Outreach Update

- Related City Boards/Commissions:
  - 4/15 Planning Commission (Glen Park Community Plan)
  - 4/21 Landmarks Preservation Advisory Board (Richmond)
  - 5/6 Planning Commission (Ingleside)
- Other Outreach:
  - www.sfpl.org/news/blip/improvementprogram.htm
  - Newsletter - issued quarterly (Winter 2004)
  - Bulletin Board – Sixth Floor

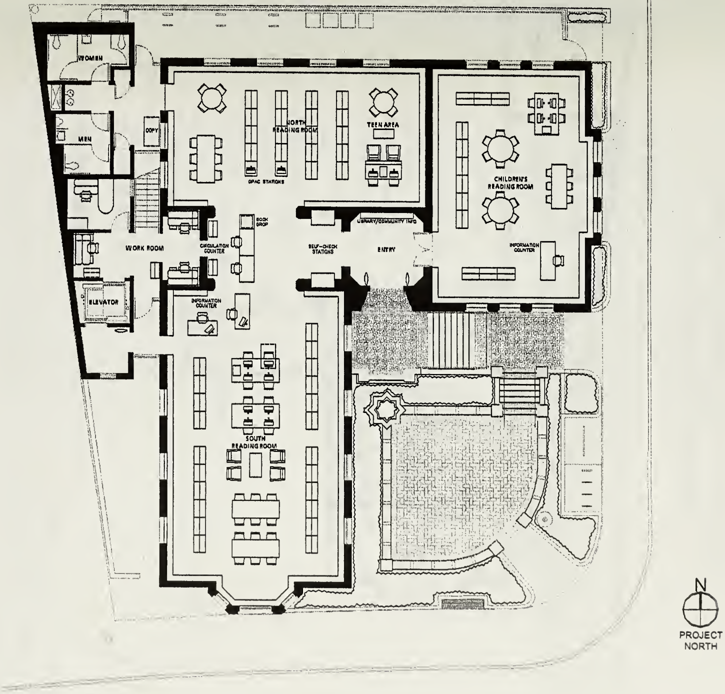


Bond Program Manager's Reports Special Report

None



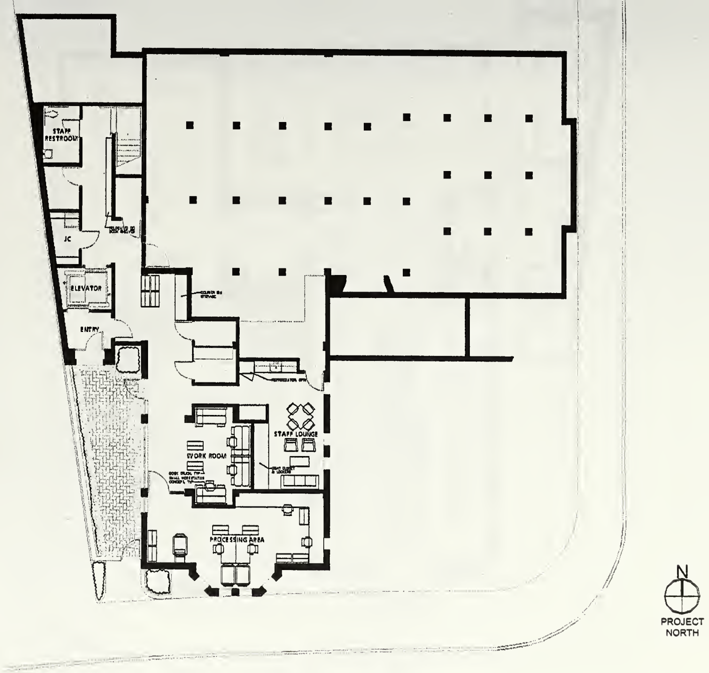
Adjournment


WOMEN
MEN
COPY
NORTH READING ROOM
TEEN AREA
OPAC STATIONS
CHILDREN'S READING ROOM
BOOK DROP
LIBRARY/COMMUNITY INFO
WORK ROOM
CIRCULATION COUNTER
SELF-CHECK STATIONS
ENTRY
INFORMATION COUNTER
ELEVATOR
INFORMATION COUNTER
SOUTH READING ROOM
N
PROJECT NORTH

SAN FRANCISCO PUBLIC LIBRARY
WEST PORTAL BRANCH

MAIN FLOOR PLAN

THOMAS HACKER
ARCHITECTS INC


STAFF RESTROOM
JC
ELEVATOR
ENTRY
COURIER BIN STORAGE
WORK ROOM
BOOK TRUCK, TYP.
SMALL WORKSTATION CONCEPT, TYP.
STAFF LOUNGE
COAT CLOSET & LOCKERS
PROCESSING AREA
N
PROJECT NORTH

SAN FRANCISCO PUBLIC LIBRARY
WEST PORTAL BRANCH

GROUND FLOOR PLAN

THOMAS HACKER
ARCHITECTS INC.

4-15-04

BRANCH LIBRARY
IMPROVEMENT PROGRAM

City & County of San Francisco
Branch Library Improvement Program

West Portal Branch Library Renovation
Frequently Asked Questions

Q. What are the plans for the branch?
A. The Library plans to make the building accessible, and reduce the seismic risk while preserving the historic character of the existing building. A small expansion at the rear of the building to recoup space needed for disabled access and seismic work is included. Also, an elevator will be added and the staff areas enhanced for greater functionality.

Q. What will be some of the benefits of the renovated branch?

- Seismic strengthening
- New restrooms
- A safe accessible elevator with an entrance from Ulloa Street
- New after hours book drop on Ulloa Street at ground level
- Improved landscaping
- Better staff work areas both upstairs and downstairs
- A designated teen area
- Better lighting
- New or restored furniture
- Clearer signage
- New computers
- Flexible Children's Room for easier programs
- Enhanced historic features such as lights, ceiling stencils, and woodwork
- New self-check machines
- A variety of seating choices
- Improved heating and ventilation

Q. When will the branch be closed and for how long?
A. The branch is scheduled to close for construction in late 2004 and reopen in fall 2006 or earlier. During the renovation, library services will be provided by increasing hours at nearby branches, holding programs at neighborhood schools and community centers, and by bookmobile service.

Q. The West Portal Branch was closed in 2002. Why close it again?
A. The only improvement was a much needed electrical upgrade. This time there will be a complete renovation.

Q. Who are the architects?
A. Thomas Hacker Architects Inc., of Portland, Oregon and Karin Payson Architects + Design of San Francisco.

Q. Will the amount of books increase?
A. The materials (books, CDs, DVDs, videos, books on tape, etc.) collection will remain the same. However, materials may be easier to find on new shelves in an improved layout. The addition of space will go for increased accessibility and new restrooms.

Q. What happens to the existing furniture?
A. Some historic pieces may be restored, but most of the furniture will be replaced. The Library has developed interior design guidelines to help the architects and staff choose appropriate furniture based on functionality, ergonomics, durability, maintenance, flexibility, sustainability, as well as the architectural period.

Q. Is the community involved in the design process?
A. Yes. A survey was conducted in September/October 2003, where 598 people gave their opinion about materials, facilities, and services at the branch. Two community meetings were held at the branch to discuss conceptual designs (November 2003 & April 2004). Before the plans are finalized, the Library Commission will hold a public Peer Review where an independent architect, planner or historic preservationist, and an interior designer review the design. Then the architects will go back to the community to discuss the final plans.

Q. Where does the money come from to renovate the branch?
A. In November 2000, the voters overwhelmingly passed a bond measure for $106 million to upgrade San Francisco's branch library system. The bond's priorities are to reduce seismic risk, meet modern technological needs and current code requirements, comply with the Americans with Disabilities Act (ADA), and provide spaces that are responsive to current services, yet flexible enough to meet future needs. In addition, while the bond pays for a significant portion of the costs, it does not pay for furniture, fixtures, and equipment. The Friends of the San Francisco Public Library will raise $16 million from private donations to pay for these costs. Call (415) 437-4859 to help with the Friends campaign.

Q. How much does construction cost for the West Portal Branch?
A. The project has a construction budget of $2.7 million to renovate and expand the existing building.

Q. How do I find out more information about my branch renovation?
A. Contact the Branch Library Improvement Program at (415) 557-4354, check www.sfpl.org, or email BLIP@sfpl.org.

4/12/2004

CURRENT B REPORT-2000 Branch Library Improvement Bond Program
April 15, 2004

	BUDGET		REVENUE					EXPENDITURES/ENCUMBRANCES	
			FUND STRATEGY			FUND STATUS			
Branch Name	Baseline Budget (10/01)	Approved Budget (2/04)	City Prop. A Bonds	Other Sources	Total All Sources	Appropriated	Total Available	Actual 31-Mar-04 B	New This Month
Site Acquisitions & New Construction									
Glen Park	4,570,000	4,681,000	4,681,000		4,681,000	4,728,250	4,728,250	288,628	114,844
Ingleside	4,570,000	4,843,000	1,943,000	2,900,000 (1)	4,843,000	2,890,000	2,890,000	2,536,453	532
Mission Bay	3,350,000	3,957,000	3,957,000		3,957,000	3,957,000	3,957,000	3,454,215	3,190,804
Portola	4,570,000	4,388,000	1,988,000	2,400,000 (1)	4,388,000	2,435,000	2,435,000	1,876,524	(47)
Support Services	9,080,000	8,876,000	8,876,000		8,876,000	8,626,000	8,626,000	8,737,289	104,100
Visitacion Valley	5,320,000	5,826,500	5,826,500		5,826,500	2,870,000	2,870,000	2,233,582	21,823
SUBTOTAL	*31,460,000*	*32,571,500*	*27,271,500*	*5,300,000*	*32,571,500*	*25,506,250*	*25,506,250*	*19,126,691*	*3,432,056*
Renovations									
Anza	4,740,000	4,503,000	4,503,000		4,503,000		0	0	0
Bayview	3,820,000	3,629,000	3,629,000		3,629,000		0	18,690	0
Bernal Heights	5,350,000	5,082,500	5,082,500		5,082,500		0	0	0
Eureka Valley	4,580,000	4,351,000	4,351,000		4,351,000		0	18,202	0
Excelsior	3,820,000	3,649,000	3,649,000		3,649,000	3,629,000	3,629,000	2,620,920	1,846,978
Golden Gate Valley	5,340,000	5,073,000	5,073,000		5,073,000	50,000	50,000	0	0
Marina	4,110,000	3,904,500	3,904,500		3,904,500	976,125	976,125	525,832	0
Merced	4,200,000	3,990,000	3,990,000		3,990,000		0	0	0
Noe Valley	4,410,000	4,189,500	4,189,500		4,189,500	1,047,125	1,047,125	734,051	962
North Beach	3,460,000	3,287,000	3,287,000		3,287,000	821,750	821,750	118	0
Ortega	3,560,000	3,382,000	3,382,000		3,382,000	350,000	350,000	139,856	1,403
Park	1,310,000	1,244,500	1,244,500		1,244,500		0	0	0
Parkside	2,880,000	3,236,000	3,236,000		3,236,000	2,736,000	2,736,000	89,204	0
Potrero	4,230,000	4,018,500	4,018,500		4,018,500		0	0	0
Presidio	1,530,000	1,453,500	1,453,500		1,453,500	353,400	353,400	116,648	0
Richmond	7,630,000	7,141,500	41,500	7,100,000 (2),(1)	7,141,500	2,441,500	2,441,500	1,004,904	4,860
Sunset	1,490,000	1,415,500	1,415,500		1,415,500	1,415,500	1,415,500	247,414	237,100
West Portal	4,110,000	3,904,500	3,904,500		3,904,500	976,125	976,125	672,398	608,609
Western Addition	3,430,000	3,258,500	3,258,500		3,258,500		0	24,805	103
SUBTOTAL	*74,000,000*	*70,713,000*	*63,613,000*	*7,100,000*	*70,713,000*	*14,796,525*	*14,796,525*	*6,213,042*	*2,700,015*
Program-Wide Services & Costs									
Library Program Costs	800,000	800,000	800,000		800,000	600,000	600,000	485,436	20
Program Consultants	750,000	750,000	750,000		750,000	562,500	562,500	114,937	2,692
City Program Management	3,600,000	3,600,000	3,600,000		3,600,000	1,013,822	1,013,822	968,998	36,762
Real Estate Dept	120,000	235,281	235,281		235,281	235,281	235,281	235,281	0
Art Enrichment Program	0	302,000	302,000		302,000	302,000	302,000	81,064	0
Program Interim Services		438,400	348,400	90,000 (4)	438,400	300,000	300,000	253,542	0
Relocation & Moving Reserve	4,360,000	410,000	0	410,000 (4)	410,000			0	0
Furniture & Equipment Reserve	15,000,000	16,000,000	0	16,000,000 (3)	16,000,000		0	0	0
Bond Financing Costs	1,500,000	1,500,000	1,500,000		1,500,000	338,622	338,622	290,051	0
Program Reserve	1,875,000	7,444,819	7,444,819		7,444,819		0	0	0
SUBTOTAL	*27,805,000*	*31,480,500*	*14,980,500*	*16,500,000*	*31,480,500*	*3,352,225*	*3,352,225*	*2,429,309*	*39,474*
TOTALS	**133,265,000**	**134,765,000**	**105,865,000**	**28,900,000**	**134,765,000**	**43,655,000**	**43,655,000**	**27,769,042**	**6,171,545**

(1) Prop. 14 State Grants
(2) Earthquake Safety Program funds remaining for Branch Libraries ($2,400,000)
(3) Private donations from Friends & Foundation
(4) Library Preservation Fund, appropriated by Board of Supervisors 03/04 AAO

PUBLIC WIRELESS INTERNET NETWORK DEMONSTRATION
AT THE
SAN FRANCISCO PUBLIC LIBRARY

An open-ended trial of a public wireless Internet network will begin soon on the 4th Floor of the Main Library. Users with their own laptops can access this free service to browse the Internet, send email and search the Library catalog and licensed databases. Laptop owners will free up time on the heavily-booked Library computers, allowing more access for other users.

Key features of the demonstration:

- 3 access points on 4th Floor
- Range of signal is 150 feet from access points. Obstructions such as book shelves, windows, & desks lessen the signal
- Unlimited simultaneous users
- Any user with a WiFi-compliant 802.11b wireless Ethernet device installed in a laptop or a laptop with built-in WiFi capability can use the network
- Access will be available all hours that Main Library is open
- Wireless LAN service has separate DSL line and is not connected to the Library's network
- Statistics on usage will be gathered – number of users per day & length of sessions
- Signage at all Main Library entrances and on the 4th floor will inform the public of the network.
- As with users who currently bring laptops to the Library to connect to our network with cables, we will not provide technical support.
- Basic instructions on how to connect to the network wireless LAN service will be posted in seating areas within the range of the signal.
- The Library's website will include information about this service.
- A Limitations and Disclaimer Statement will be posted with proposed text:

  > The Library's wireless network is not secure. Information sent from or to your laptop can be captured by anyone else with a wireless device and the appropriate software, within three hundred feet. Library staff is not able to provide technical assistance and no guarantee can be provided that you will be able to make a wireless connection. The Library assumes no responsibility for the safety of equipment or for laptop configurations, security, or data files resulting from connection to the Library's network.

- Local libraries currently using WiFi access:

  Foster City
  Half Moon Bay
  Menlo Park
  Palo Alto
  Redwood City
  Santa Clara University
  Sonoma County
  Sonoma State
  University of San Francisco

4/12/04

E-file sets record

[illegible]

Business

The Examiner.
Monday, April 12, 2004

Wired into wireless

Bay Area has the most Wi-FI hot spots in the nation, study reports

BY MATTHEW FORDAHL
Associated Press

SAN JOSE — The Bay Area is the nation's top market for wireless Internet hot spots, according to a new study sponsored by Intel Corp.

The region was followed by Orange County, Washington, D.C., and Austin, Texas. Last year's "most unwired" area, Portland, Ore., was bumped to No. 5 on the list compiled for the semiconductor giant by "Best Places" author Bert Sperling.

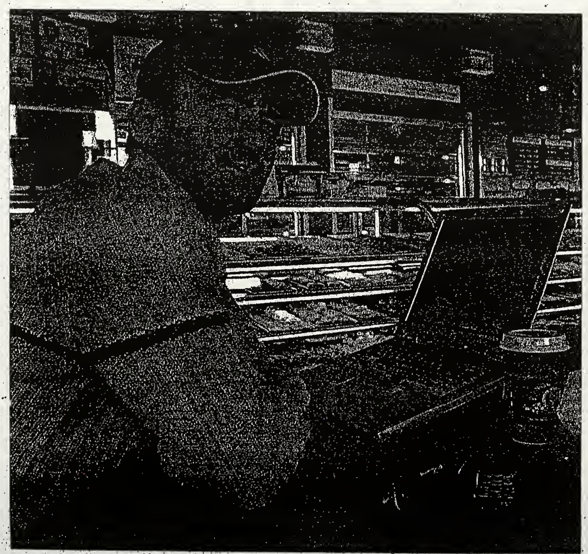
Intel, which has invested hundreds of millions of dollars in marketing its Centrino mobile chip sets, sees the growing popularity of Wi-Fi wireless Internet service as a big driver of microprocessors, particularly those used in laptop and handheld computers.

Wi-Fi is no longer limited to airports, coffee houses and home networks. Hot spots are springing up in tourist spots, truck stops, RV parks and shopping malls. Intel's survey did not say what percentage of the hot spots were paid versus free.

Sperling also found:

- Indiana University in Bloomington, Ind., is the nation's most unwired campus. It's followed by Purdue University, the University of Texas at Austin, Case Western Reserve University and Dartmouth College.
- Dallas-Forth Worth is the best U.S. airport for Wi-Fi access, followed by New York LaGuardia, Atlanta Hartsfield, Chicago O'Hare and Baltimore-Washington.

The studies' findings were based on calculations involving the number of wireless access points and the number of people in the metropolitan region, college or airport, among other factors.

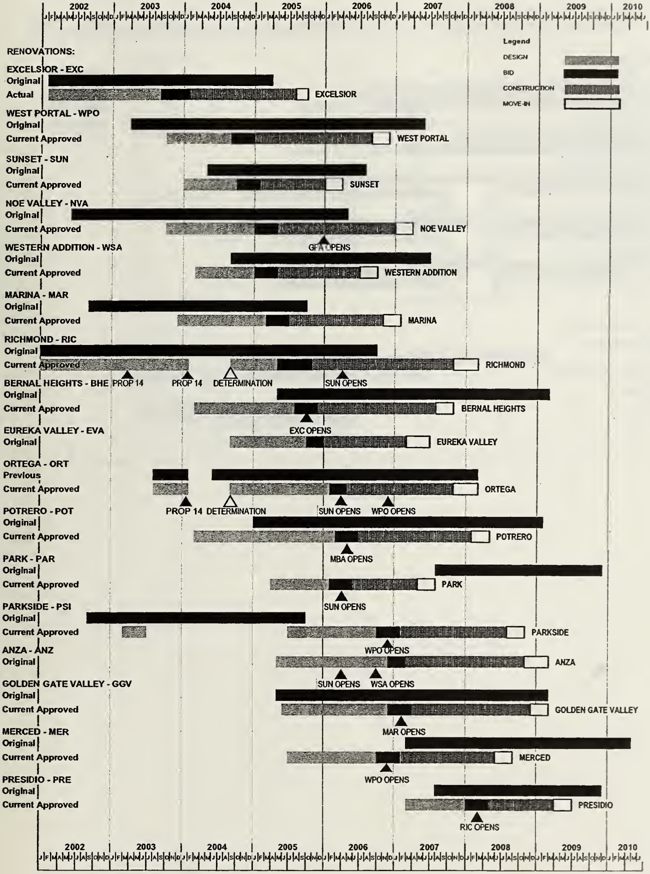


PAUL SAKUMA/AP

Mark Brooks works at his laptop PC using the unlimited 24-hour free Wi-Fi service at Happy Donuts in Palo Alto.

Branch Library Program Summary Schedules

Monthly Bond Program Manager's Report
Approved February 19, 2004



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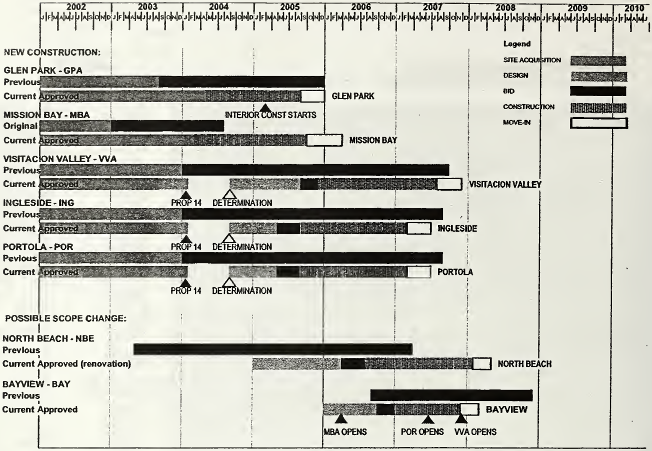

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